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EDITORIJAL EDITORIAL

Reč urednika
Editor's note

Poštovane koleginice i kolege, uvaženi saradnici, dragi prijatelji,

Pred Vama je trinaesti po redu broj časopisa „Medicinska reč" koji već četvrtu godinu kontinuirano promoviše vrednosti koje čine obrazovanje u medicinskoj struci dragocenim. Ovoga puta časopis predstavlja zbornik stručnih saopštenja akreditovanih predavača na tradicionalnom kongresu NAUZRS koji se održava u Vrnjačkoj banji, a koji je poseban iz razloga što je akreditovan isključivo za medicinske sestre i zdravstvene tehničare. To ukazuje na izuzetan značaj stručne edukacije medicinskih sestara koje u sklopu svog humanog poziva moraju stalno da unapređuju svoje znanje i veštine, kako bi u koordinaciji sa lekarima i ostalim kolegama, kroz timski rad i međusobno razumevanje dale svoj najbolji rezultat u radu.

Tokom pet dana kongresa biće obrađene raznolike teme, kao što su rad medicinskih sestara i tehničara na nivou primarne, sekundarne i tercijarne zdravstvene zaštite, vođenje i primena medicinske dokumentacije, raspolaganje resursima i ulogama zdravstvenog sistema, a ono što je posebno upečatljivo čitaocima ovog izdanja časopisa svakako jeste veliki broj radova predavača različitih sekcija i društava koje se odnose na tzv. „burn-out" sindrom zdravstvenih radnika. Značajan uticaj na psihičko zdravlje zaposlenih u zdravstvu u poslednjih nekoliko godina imali su izmenjeni uslovi rada zbog epidemije korona virusom, kao i dodatni stres na radu, koji se prema istraživanjima javio u više od dve trećine zaposlenih u zdravstvenim ustanovama. Zato i ne čudi sagledavanje ovog sindroma sa različitih aspekata, a sve u cilju pravovremenog prepoznavanja problema, utvrđivanja programa pre-

Respected colleagues and associates, dear friends,

There is the thirteenth issue of the journal "Medical Word" in front of you, which for the fourth year has been continuously promoting the values that make education in the medical profession appreciated. This time, the journal presents a collection of expert announcements by accredited lecturers at the traditional National Association of the Health Workers in Serbia congress held in Vrnjačka Banja, which is special because it is accredited exclusively for nurses and healthcare technicians. This indicates the exceptional importance of the professional education of nurses who, as part of their humane vocation, must constantly improve their knowledge and skills, to give the best results in their work in coordination with doctors and other colleagues, through teamwork and mutual understanding.

During the five days of the congress, various topics will be covered, such as the work of nurses and technicians at the level of primary, secondary, and tertiary healthcare, management and application of medical records, use of resources, and roles of the health system, and what is particularly impressive to the readers of this edition of the journal there is certainly a large number of papers by lecturers of different sections and societies that refer to the so-called "burn-out" syndrome of healthcare workers. Changes in working conditions due to the coronavirus epidemic, as well as additional stress at work, which, according to research, occurred in more than two-thirds of employees in healthcare institutions, had a significant impact on the mental health of healthcare employees in the last few years. That is why it is not surprising to look at this syndrome from different points of view, all with

vencije i mera osnaživanja zdravstvenih radnika. Svaki rad pojedinačno pruža priliku za diskusiju, promišljanje i razmenu ideja i iskustava.

Posebnu zahvalnost upućujemo akademiku, profesoru emeritusu dr Beli Balintu koji je, verujući u naš entuzijazam i motive, uz ogromnu stručnu podršku i nesebičnu pomoć, učestvovao u stvaranju i afirmaciji „Medicinske reči“ i ovog puta se odazvao pozivu organizatora da učestvuje na kongresu kao plenarni predavač.

the aim of timely recognition of the problem, and determination of prevention programs and measures to empower health workers. Each paper individually provides an opportunity for discussion, reflection, and exchange of ideas and experiences.

We express our special thanks to the academician, professor emeritus Dr. Bela Balint, who, believing in our enthusiasm and motives, with enormous professional support and selfless help, participated in the creation and affirmation of the “Medical Word” and this time responded to the organizer’s invitation to participate in the congress as a plenary lecturer.

Glavni i odgovorni urednik
Prim dr sci. med. Ana Antić,
profesor strukovnih studija

Editor-in-Chief
Prim. Ana Antić, MD, PhD,
Professor of vocational studies

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APSTRAKT 1S 2024; 5(1): 1–2 ABSTRACT 1E

Aferezno prikupljanje ćelija iz periferne krvi i lečenje ćelijama – posredovanom hemobioterapijom imunski-posredovanih i nekih malignih poremećaja primenom DC i car T-ćelija

Apheresis Collection of Cells from Peripheral Blood and Treatment with Cell-mediated Chemotherapy of Immune-mediated and Some Malignant Disorders Using DC and CAR T-cells

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Apstrakt

Pored nadoknade deficitarnih sastojaka krvi suportivnom primenom hemoprodukata, hemoterapija podrazumeva korišćenje procedura afereze radi prikupljanja plazme ili krvnih ćelija (aferezna donacija), i uklanjanje ili zamenu abnormalnih ili prekomernog broja krvnih kostituenata, uz postizanje imunomodulacijskog ili hemomodulacijskog efekta (terapijska afereza – TAph). Osnovni cilj TAph je da smanji „opterećenje bolesnika" patogenim agensima (supstratom), koji su odgovorni za razvoj bolesti, na nivoe koji će omogućiti kliničko poboljšanje.

Hemoterapija, takođe, obuhvata prikupljanje matičnih ćelija (MĆ) – za transplantaciju i za upotrebu u regenerativnoj medicini – kao i prikupljanje, ex vivo manipulaciju i (re)infuziju imunokompetentnih ćelija radi postizanja ćelijama-posredovanih pozitivnih efekata. Uopšteno, imunoterapija uključuje upotrebu monoklonskih antitela, vakcina, ćelijama-posredovanih terapijskih modaliteta radi identifikacije i eliminacije malignih ćelija.

Vakcine sa dendritičnim ćelijama (DC) veoma dobro ilustruju aktivnu, ćelijama-posredovanu imunoterapiju. Osnovni cilj je da aktivišu efektorske T ćelije i da indukuju uništavanje malignih ćelija. Terapiju karcinoma zasnovanu na primeni DC ili strategiji vakcinisanja moguće je okarakterisati povoljnim terapijskim potencijalom i bezbednošću – uz nedostatak toksičnosti, u poređenju sa drugim terapijama maligniteta (visoko-dozna hemioterapija). U našem Odeljenju za aferezu i hemoterapiju prikupljanje MNC je izvedeno korišćenjem aparata Spectra-Optia – kao inicijalna faza DC-posredovanog tretmana bolesnika sa karcinomom prostate (PCa; n = 35). Ćelije su prikupljene iz krvi bolesnika u fiziološkoj ravnoteži hematopoeze. Periferne (antekubitalne) vene su korišćene kao vaskularni pristup, a ponekad je primenjen centralni venski kateter (n = 3) upotrebom vene subklavije ili jugularnih vena. Bolesnicima je data antikoagulacija sa ACD-A (koncentracija citrata = 2,2%). Volumen procesirane krvi tokom pojedinačnih procedura afereza bio je 9684,0 ± 2016

Abstract

In addition to compensating for deficient blood components with the supportive use of chemo products, chemotherapy involves the use of apheresis procedures to collect plasma or blood cells (apheresis donation) and the removal or replacement of abnormal or excessive blood components, while achieving an immunomodulating or chemo modulating effect (therapeutic apheresis). The main goal of therapeutic apheresis is to reduce the "load of the patient" with pathogenic agents (substrate), responsible for the development of the disease, to levels that will enable clinical improvement.

Chemotherapy also includes the collection of stem cells – for transplantation and for use in regenerative medicine – as well as the collection, ex vivo manipulation and (re)infusion of immunocompetent cells to achieve cell-mediated positive effects. In general, immunotherapy involves the use of monoclonal antibodies, vaccines, cell-mediated therapeutic modalities to identify and eliminate malignant cells.

Dendritic cell (DC) vaccines very well exemplify active, cell-mediated immunotherapy. The main goal is to activate effector T cells and to destroying malignant cells. Cancer therapy based on DC application or vaccination strategy can be characterized by favorable therapeutic potential and safety – with a lack of toxicity compared to other malignancy therapies (high-dose chemotherapy). In our Department of Apheresis and Chemotherapy, MNC collection was performed using the SpectraOptia system - as the initial phase of DC-mediated treatment of patients with prostate cancer (PCa; n = 35).

The cells were gathered from the blood of patients in physiological balance of hematopoiesis. Peripheral (antecubital) veins were used as vascular access, and a central venous catheter was sometimes used (n = 3) using the subclavian or jugular veins. Patients were given anticoagulation with ACD-A (citrate concentration = 2.2%). The volume of processed blood during individual apheresis procedures was 9684.0±2016 mL, and the total volume of ACD-A used was 691.3±98.2 mL on average. The mean volume of the collected

mL, a ukupna zapremina korišćenog ACD-A je u proseku iznosila 691,3 ± 98,2 mL. Srednji volumen suspenzije prikupljenih ćelija bio je 179,9 ± 29,6 mL. U ovoj grupi bolesnika neželjeni događaji (hipokalcemija izazvana toksičnošću citrata) nisu konstatovani.

Terapija „himernog-antigen-receptora" T (CAR-T) ćelijama počinje prikupljanjem autolognih MNC (limfocita) iz periferne krvi (PB) bolesnika leukaferezom (MNC-afereza), bez primene rHuG-CSF. Nakon prikupljanja, autologni limfociti i/ili monociti bolesnika podvrgnuti su transdukciji gena. Naime, proces ex vivo manipulacije predstavlja transdukciju gena korišćenjem lentivirusnih ili retrovirusnih vektora. U fazi „pre-reinfuzije", kod bolesnika je primenjen citoreduktivni tretman radi smanjenja broja limfocita u cirkulaciji. Manipulisani i reinfundirani autologni limfociti usmereni su protiv tumorskih ćelija bolesnika.

Na osnovu podataka iz literature, kao i sopstvenih rezultata, moguće je zaključiti da uprkos razvoju ekspertize i dobijenim povoljnim rezultatima primenom CAR-T ćelija u hematoonkologiji, solidni tumori i dalje predstavljaju veliki terapijski izazov. Međutim, nesumnjivo je da ćelijama-posredovana terapija treba da bude sastavni deo lečenja karcinoma, uključujući i metastatski karcinom prostate rezistentnog na kastraciju (mCRPCa).

Prema tome, u proteklim decenijama ćelijama-posredovana imunoterapija postala je efikasan inovativni terapeutski „alat" za brojne uznapredovale karcinome, uključujući donekle i mCRPCa. Za definitivnu potvrdu početnih kliničkih rezultata potrebna su buduće randomizovane studije, sa većim brojem ispitivanih bolesnika.

Ključne reči: afereza, leukafereza, ćelijama-posredovana hemobioterapija, dendritske ćelije, CAR-T ćelije, karcinomi

cell suspension was 179.9±29.6 ml. In this group of patients, no adverse events (hypocalcemia caused by citrate toxicity) were noted.

Therapy with "chimeric-antigen-receptor" T (CAR-T) cells begins with the collection of autologous MNC (lymphocytes) from the patient's peripheral blood (PB) by leukapheresis (MNC-apheresis), without the use of rHuG-CSF. After collection, the patient's autologous lymphocytes and/or monocytes are subjected to gene transduction. Namely, the process of ex vivo manipulation represents gene transduction using lentiviral or retroviral vectors. In the "pre-reinfusion" phase, cytoreductive treatment was applied to the patient in order to reduce the number of lymphocytes in the circulation. Manipulated and reinfused autologous lymphocytes are directed against the patient's tumor cells.

Based on data from the literature, as well as our own results, it is possible to conclude that despite the development of expertise and the favorable results obtained with the use of CAR-T cells in hemato-oncology, solid tumors still represent a great therapeutic challenge. However, there is no doubt that cell-mediated therapy should be an integral part of cancer treatment, including metastatic castration-resistant prostate cancer (mCRPCa).

On that account, in the past decades, cell-mediated immunotherapy has become an effective innovative therapeutic "tool" for numerous advanced cancers, including to some extent mCRPCa. For a definitive confirmation of the initial clinical results, future randomized studies with a larger number of examined patients are needed.

Key words: apheresis, leukapheresis, cell-mediated chemotherapy, dendritic cells, CAR-T cells, cancer

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APSTRAKT 2S 2024; 5(1): 3–3 ABSTRACT 2E

Uloga medicinske sestre/tehničara u kliničkim istraživanjima
The Role of a Nurse in Clinical Inquiry

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Apstrakt

Klinička ispitivanja su od velike važnosti za poboljšanje zdravlja ljudi i razvoj novih lekova i zdravstvenih tehnologija. Okolnosti savremenog sveta, kao što su novi dizajn ispitivanja i pitanja informisanog pristanka, pojavljuju se kao rezultat genomskog profilisanja i razvoja lekova ciljanih mehanizama na molekularnom nivou. Medicinske sestre/tehničari, angažovani za klinička istraživanja, imaju važne, jasno definisane uloge i odgovornosti, koje su u pojedinim aspektima esencijalnog karaktera. Njihove kompetencije se odnose na pitanja u rasponu od procene protokola i informisanog pristanka, do organizacije istraživačkog tima i neposrednog upravljanja pojedinim poslovima na istraživačkom mestu. Organizatori kliničkih ispitivanja treba da budu svesni zahteva da je potrebna puna podrška radu medicinskih sestara kako bi se unapredila efikasnost i, u pojedinim slučajevima, optimalno decentralizovanje uloga i odgovornosti. Upravljanje radnim zadacima, obuka i nadzor moraju biti prilagođeni specifičnim karakteristikama svake nove studije kako bi se osigurala puna podrška medicinskim sestrama-istraživačima u ovoj novoj i proširenoj ulozi.

Ključne reči: medicinske sestre, klinička istraživanja, radni uslovi.

Abstract

Clinical inquiry is of great importance for the improvement of human health and the development of new medicines and health technologies. Circumstances of the modern world such as new trial design and informed consent issues are emerging as a result of genomic profiling and drug development targeting mechanisms at the molecular level. Nurses hired for clinical inquiry have important, clearly defined roles and responsibilities, which are essential in certain aspects. Their competences relate to issues ranging from protocol evaluation and informed consent to research team organization and direct management of individual tasks at the research site. Organizers of these researches should be aware of the requirement that full support is needed for the work of nurses in order to improve efficiency and, in some cases, optimal decentralization of roles and responsibilities. Workload management, training and supervision must be adjusted to the specific characteristics of each new study to ensure that nurse researchers are fully supported in this new and expanded role.

Key words: nurses, clinical inquiry, working conditions.

XIX Kongres Nacionalne asocijacije udruženja zdravstvenih radnika Srbije (NAUZRS) sa međunarodnim učešćem, Vrnjačka Banja, 22–26. maj 2024.
XIX Congress of the National Association of Health Workers of Serbia (NAHWS) with International Participation, Vrnjačka Banja, 22nd–26th May 2024

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APSTRAKT 3S 2024; 5(1): 4–5 ABSTRACT 3E

Monitoring u jedinici intenzivnog lečenja
Monitoring in the Intensive Treatment Unit

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Apstrakt

Prepoznavanje kritičnog pacijenta i rana primena terapijskih mera preveniraju srčani zastoj i predstavljaju prvu kariku u lanca preživljavanja.

ABCDE algoritam obavlja se brzo u pet koraka i obuhvata proveru: disajnog puta, disanja, cirkulacije, neurološkog statusa i pregled celog tela pacijenta. Kritični znaci pogoršanja pacijenta slični su, bez obzira na uzrok, tako da adekvatan pristup ABCDE traumatizovanom pacijentu podrazumeva: pravilno prepoznavanje mehanizma povređivanja, prepoznavanje simptoma i vrste preloma, njihovu imobilizaciju, prepoznavanje i zaustavljanje krvarenja, nadoknadu volumena i poziv za pomoć.

Inicijalni pregled počinje slovom A, što predstavlja prohodnost disajnog puta. Disajni put može biti prohodan, delimično i kompletno opstruiran. Disanje proveravamo metodom GLEDAJ – SLUŠAJ – OSEĆAJ koja ne traje duže od 10 sekundi i za to vreme palpiramo puls. U sklopu pregleda disanja bitni parametri su saturacija kiseonika, respiratorna frekvenca, auskultacija pluća i pokretljivost grudnog koša. Dve osnovne tehnike otvaranja disajnog puta su: zabaci bradu – podigni glavu i trostruki hvat. Pomagala koja obezbeđuju prohodnost disajnog puta su: orofaringealni i nazofaringealni tubus. Alternativna supraglotična sredstva koja koristimo kao napredne tehnike obezbeđenja disajnog puta su: laringealna maska, I-gel maska, laringealni tubus, king laringealni tubus i mnoga druga sredstva novije generacije. Probleme na nivou cirkulacije pratimo pomoću cirkulatornih parametara: tenzija, vreme kapilarnog punjenja (periferna perfuzija), auskultacija srca i srčana frekvenca. Prepoznavanje cirkulatornog kolapsa i adekvatna nadoknada volumena, uz kontinuirani monitoring ritma i pritiska, smanjuju rizik od nastanka smrti. U sklopu neurološkog statusa, važna je procena simetričnosti zenica, koncentracije glukoze u krvi, brza procena nivoa svesti (AVPU – skala). A – odgovara pacijentu koji je svestan i orijentisan, V – pacijent koji odgovara na govorne komande, P – predstavlja reakciju na bolne draži, U – kada izostaje odgovor na bilo koji stimulus. Kompletan ABCDE pristup završava se otkrivanjem pacijenta uz minimalan gubitak toplote, proveru znakova alergije, traume i hemoragije.

ABCDE pristup je kompletiran uz upotrebu kontinuiranog monitoringa, dvanestokanalnog EKG-a, promenom IV linije, oksigeno-terapijom, kao i efikasnom komunikacijom sa timom. Najteži oblik pogoršanja je kardiorespiratorni zastoj, gde je indikovano što pre započeti mere napredne životne podrške koje uključuju: primenu visoko kvalitetne kompresije grudnog koša (dubina kompresije 5–6 cm, frekvenca 100–120/min), obezbeđenje disajnog puta, postavljanje elektroda defibrilatora i registrovanje inicijalnog ritma srčanog zastoja. Za efikasno zbrinjavanje potrebno je razmotriti reverzibilne uzroke, uz primenu tretmana za šokabilne ili nešokabilne ritmove i upotrebu

Abstract

Recognition of a critical patient and early application of therapeutic measures prevents cardiac arrest and represents the first link in the chain of survival.

The ABCDE algorithm is performed quickly, in five steps, and includes a check of the airway, breathing, circulation, neurological status, as well as an examination of the patient's entire body. Critical signs of patient deterioration are similar regardless of the cause, so an adequate approach to the ABCDE of a traumatized patient includes proper recognition of the mechanism of injury, recognition of symptoms, types of fractures, their immobilization, recognition and stopping of bleeding, volume replacement and calling for help.

The initial examination begins with the letter A, which represents the patency of the airway. Airway can be passable, partially or completely obstructed. We check breathing using the LOOK - LISTEN - FEEL method, which lasts no longer than 10 seconds, and during that time we palpate the pulse. As part of the breathing examination, important parameters are oxygen saturation, respiratory rate, lung auscultation and chest mobility. The two basic techniques for opening the airway are: chin tuck - head lift and triple grip. Aids that ensure airway patency are: oropharyngeal and nasopharyngeal tubes. Alternative supraglottic devices that we use as advanced techniques for securing the airway are: laryngeal mask, I-gel mask, laryngeal tube, king laryngeal tube and many other devices of the newer generation), auscultation of the heart and heart rate. Recognition of circulatory collapse and adequate volume replacement, along with continuous monitoring of rhythm and pressure, reduces the risk of death. As part of the neurological status, it is important to assess the symmetry of the pupils, the concentration of glucose in the blood, the rapid assessment of the level of consciousness (AVPU - scale). A - corresponds to a patient who is conscious and oriented, V - a patient who responds to voice commands, P - represents a reaction to painful stimuli, U - when there is no response to any stimulus. The complete ABCDE approach is completed by exposing the patient with minimal heat loss, checking for signs of allergy, trauma, and hemorrhage.

The ABCDE approach was completed with the use of continuous monitoring, twelve-lead ECG, IV- line change, oxygen therapy, and effective communication with the team. The most severe form of deterioration is cardiorespiratory arrest, where it is indicated to start advanced life support measures as soon as possible, which include the application of high-quality chest compression (compression depth 5 - 6 cm, frequency 100 - 120/min), securing the airway, placing defibrillator electrodes and registering the initial rhythm of cardiac arrest. For effective care, it is necessary to consider reversible causes, with the application of treatment for shockable or non-shockable rhythms and the use of appropriate drugs. We can use the defibrillator

odgovarajućih lekova. Defibrilator možemo upotrebiti za uspešnu i sigurnu defibrilaciju, za brzu procenu ritma, sinhronu kardioverziju i neinvazivnu transkutanu elektrostimulaciju srca. Nakon srčanog zastoja, povratak spontane cirkulacije zahteva kvalitetan postresustacioni tretman koji će značajno uticati na životni ishod pacijenta.

for successful and safe defibrillation, for rapid rhythm assessment, synchronous cardioversion and non-invasive transcutaneous electrostimulation of the heart. After a cardiac arrest, the return of spontaneous circulation requires quality treatment that will significantly affect the patient's life outcome.

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APSTRAKT 4S 2024; 5(1): 6–7 ABSTRACT 4E

Konjuktivitis i prevencija
Conjunctivitis and Prevention

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Apstrakt

Konjunktivitis je inflamatorna bolest konjunktiva, uzrokovana različitim agensima. Najčešće ga izazivaju mikroorganizmi, od kojih su najčešći virusi, a posle njih najčešće su bakterije, mikoze ili parazitske infekcije. Čest uzrok crvenila i upale konjunktiva je alergija.

Prema toku razlikujemo: hiperakutne, akutne i hronične poteškoće. Prema uzroku su podeljeni u dve velike grupe: infektivne (virusi, bakterije, klamidija, gljivice, paraziti) i neinfektivne (alergije, autoimuna oboljenja, ostalo – prljavština, dim, prašina, šampon, hlor u bazenima).

Prilikom utvrđivanja dijagnoze koriste se sledeće metode: medicinska istorija (anamneza), pregled prednjeg segmenta oka, everzija – okretanje očnog kapka, bris sa kapka, u slučaju sumnje i postojanosti upale – bakterijska kultura (moguće virusna), uzorkovanje krvi, alergijski testovi.

Anamnestički podaci: očni simptomi i znaci (svrab, sekrecija, iritacija, bol, fotofobija, zamagljen vid). Simptomi i znaci koji su potencijalno povezani sa nekim sistemskim bolestima su: (genitourinarna sekrecija, dizurija, disfagija, infekcija gornjeg respiratornog trakta, promene na koži i sluzokoži), alergija, astma, ekcem, upotreba lokalne i sistemske terapije, oftalmološka anamneza (ranije epizode konjunktivitisa i ranije očne operacije), pad imuniteta, sadašnje i prethodne sistemske bolesti, socijalna anamneza (pušenje, zanimanje i hobi, putovanja, seksualna aktivnost).

Prvi pregled: vidna oštrina, inspekcija, koža (znaci rozacee, ekcema, seboreje), abnormalnosti kapaka i adneksa oka (otok, diskoloracija, pozicija, gubitak elastičnosti, ulceracija, noduli, ekhimoze, neoplazme), konjunktiva (tip hiperemije, subkonjunktivilna hemoragija, hemoza, ožiljne promene, simblefaron, tumefakti, sekrecija).

Biomikroskopski pregled: ivice kapaka (inflamacija, ulceracija, sekrecija, noduli ili vezikule, krvavi debris, keratinizacija), trepavice (gubitak trepavica, stvaranje krusta, perut, gnjide, vaši, trihijaza), suzni punktumi i kanalikuli (prominencija, sekrecija), konjunktiva tarzusa i forniksa, bulbarna konjunktiva/limbus (folikuli, edem, noduli, gubitak elastičnosti, papile, ulceracije, ožiljavanje, fliktene, hemoragije, strana tela, keratinizacija), rožnjača, prednja komora/dužica (inflamatorna reakcija, sinehije, transiluminacioni defekti), obojavanje (konjunktiva i rožnjača).

Dijagnostički testovi: Uzimanje brisa. Kod pacijenata sa SLK indikovano je ispitivanje funkcije štitaste žlezde, ukoliko nemaju dokazanu disfunkciju.

Kontrolni pregledi treba da uključuju sledeće: anamnezu u prethodnom periodu, vidnu oštrinu, biomikroskopski pregled.

Abstract

Conjunctivitis is an inflammatory disease of the conjunctiva caused by various agents. It is most often caused by microorganisms, the most common of which are viruses, followed by bacteria, mycoses, or parasitic infections. A common cause of redness and inflammation of the conjunctiva is allergy.

According to the course, we distinguish hyperacute, acute, and chronic difficulties. According to the cause, they are divided into two large groups: infectious (viruses, bacteria, chlamydia, fungi, parasites) and non-infectious (allergies, autoimmune diseases, other - dirt, smoke, dust, shampoo, chlorine in swimming pools).

When determining the diagnosis, the following methods are used: medical history (anamnesis), examination of the anterior segment of the eye, eversion - turning the eyelid, smear from the eyelid, in case of suspicion and persistence of inflammation - bacteria culture (possibly viral), blood sampling, allergy tests.

Anamnesis data: eye symptoms and signs (itching, discharge, irritation, pain, photophobia, blurred vision). Symptoms and signs potentially associated with some systemic diseases (genitourinary secretion, dysuria, dysphagia, upper respiratory tract infection, skin and mucous membrane changes), allergy, asthma, eczema, use of local and systemic therapy, ophthalmic history (previous episodes of conjunctivitis and previous eye surgeries), decreased immunity, current and previous systemic diseases, social history (smoking, occupation and hobbies, travel, sexual activity).

First examination: visual acuity, inspection, skin (signs of rosacea, eczema, seborrhea), abnormalities of the eyelids and adnexa of the eye (swelling, discoloration, position, loss of elasticity, ulceration, nodules, ecchymoses, neoplasms), conjunctiva (type of hyperemia, subconjunctival hemorrhage, chemosis, scar changes, symblepharon, swellings, secretion)

Biomicroscopic examination: lid margins (inflammation, ulceration, secretion, nodules or vesicles, bloody debris, keratinization), eyelashes (loss of eyelashes, crusting, dandruff, nits, lice, trichiasis), lacrimal punctums and canaliculi (prominence, secretion), conjunctiva tarsus and fornix, bulbar conjunctiva/limbus (follicles, edema, nodules, loss of elasticity, papillae, ulceration, scarring, phlycten, hemorrhages, foreign bodies, keratinization), cornea, anterior chamber/iris (inflammatory reaction, synechiae, transillumination defects), staining (conjunctiva and cornea).

Diagnostic tests: Taking a swab. In patients with SLK, a test of the function of the thyroid gland is indicated if there is no evidence of dysfunction.

Control examinations should involve the following: history in the previous period, visual acuity, and biomicroscopic examination.

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Prevencija uključuje: redovno pranje ruku sapunom i vodom; ne dirati oči prljavim rukama; ne koristiti tuđe peškire (svaki član domaćinstva treba da ima svoj peškir za lice); lične kapi, sopstvena šminka; voditi računa o kontaktnim sočivima; koristiti naočare za sunce kada se boravi u prirodi, na suncu, na vetru; dovoljan unos tečnosti; vitamini (uglavnom A) i multiminerali; koristiti zaštitnu opremu pri rizičnim poslovima; zaražene osobe, posebno deca, treba da ostanu kod kuće, u izolaciji, za vreme trajanja bolesti.

Tokom perioda upale, preporučuje se izbegavanje upotrebe kontaktnih sočiva. U lečenju pomažu kapi za vlaženje oka, veštačke suze i hladne obloge. Za obloge se mogu koristiti crni i zeleni čaj, kamilica, uljane repice, neven.

Pored toga, bitno je i sledeće: čuvati oči i ne naprezati ih; ograničiti gledanje TV-a i gledanje u monitor; napolju treba zaštititi oči naočarama, izbegavati vetar, promaju, klimatizaciju; izbegavati boravak u blizini nadražujućih supstanci. Edukacija pacijenata:

Edukovati zaražene pacijente da bi se smanjilo ili preveniralo širenje zaraznih bolesti u zajednici. Informisati pacijenta koji zahteva ponavljanu kratkotrajnu kortikosteroidnu terapiju o potencijalnim komplikacijama upotrebe kortikosteroida. Upoznati pacijenta sa alergijskim konjunktivitisom da češće pranje garderobe i kupanje pre spavanja mogu biti od koristi.

Prevention includes regular hand washing with soap and water, not touching your eyes with dirty hands, and not using other people's towels, Each household member should have their own face towel, personal drops, and own make-up. Take care of contact lenses, use sunglasses when staying in nature, in the sun, in the wind, sufficient fluid intake, vitamins (mainly A) and multi-minerals, and use protective equipment in risky jobs, infected persons, especially children, should stay at home in isolation for the duration of the disease.

During the period of inflammation, it is recommended to avoid using contact lenses. Eye drops, artificial tears, and cold compresses help in the treatment. Black and green tea, chamomile, oilseed rape, calendula can be used for poultices.

In addition, take care of your eyes and do not strain them thus limiting watching TV and looking at the monitor, when you are outside, protect your eyes with glasses, and avoid wind, draught and air conditioning. In the case of irritating substances, avoid being near them.

Patient education: Educate infected patients to reduce or prevent the spread of infectious diseases in the community. Inform the patient who requires repeated short-term corticosteroid therapy about the potential complications of corticosteroid use. Tell the patient with allergic conjunctivitis that washing clothes more often and bathing before going to bed can be beneficial.

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APSTRAKT 5S 2024; 5(1): 8–8 ABSTRACT 5E

Stresovi i reakcije medicinskog osoblja na hemodijalizi
Stresses and Reactions of Medical Staff to Hemodialysis

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Apstrakt

U medicini je u poslednjem veku došlo do niza revolucionarnih otkrića koja omogućuju uspešno lečenje mnogih bolesti. Ovaj progres je doveo do pomeranja granica do kojih je moguće produžiti ljudski život ugrožen bolešću. Broj bubrežnih bolesnika, koji jedino uz pomoć dijalize ili transplantacije mogu da nastave da žive, veliki je. Napretkom medicine postignuto je da nefrološki bolesnici žive dugi niz godina, ali uz pojavu mnogih problema psihološke, socijalne i ekonomske prirode. Psihološke promene vezane za dijalizu jednako su prisutne kod pacijenata, njihovih porodica, kao i osoblja koje radi na njihovom zbrinjavanju.

Zahtevi profesionalne uloge, odnos sa ostalim osobljem i pacijentima dominantne su zone izvora stresa za osoblje. Osoblje i pacijenti grade različite strategije prilagođavanja koje mogu biti više ili manje uspešne. Visoko obučeno osoblje na hemodijalizi izgrađuje velika očekivanja, u odnosu na uspešnost dijalize. Velika je i verovatnoća da će ta očekivanja biti izneverena, bar povremeno, bilo kroz: slabu saradnju pacijenata, njihovu agresivnost ili pogoršanje somatskog stanja.

I u savremenim uslovima poslovanja za profesionalni stres, jedan od modernijih termina u organizacijskoj psihologiji, je burnout sindrom. Ovaj sindrom podrazumeva stanje psihičke i emocionalne iscrpljenosti, koje dovodi do smanjene efikasnosti na poslu. Izgaranje (burnout) ili iscrpljenost se javlja zbog neusklađenosti ambicija, ideja, ciljeva i zadataka na poslu, preteranog rada i/ili loših međuljudskih odnosa, zbog čega osoba postaje izložena hroničnom stresu. Sindrom izgaranja je „odgovor" organizma na hroničan stres na radnom mestu, i označava proces koji nastaje u profesionalnom odnosu. Opisuje se kao niz telesnih i mentalnih simptoma iscrpljenosti, odnosno, kao odloženi odgovor na hronične emocionalne i interpersonalne stresne događaje.

Zaključak: Medicinske sestre u hemodijalizi izložene su nizu stresogenih faktora. Strategije borbe protiv stresa zavise od individualnih sklopova ličnosti, ali i organizacije rada jedinice za dijalizu. Važno je da medicinske sestre veruju sebi i neguju svoje ideale, ne dovodeći svoje psihofizičko u pitanje.

Abstract

In the last century, a series of revolutionary discoveries have been made in medicine that enable the successful treatment of many diseases. This progress has led to a shift in the limits to which it is possible to extend human life threatened by the disease. The number of kidney patients, who can only continue to live with the help of dialysis or transplantation, is large. With the progress of medicine, it has been achieved that nephrological patients live for many years, but with the appearance of many problems of a psychological, social, and economic nature. Psychological changes related to dialysis are equally present in patients, their families, and the staff working on their care.

The demands of the professional role and the relationship with other staff and patients are the dominant zones of sources of stress for the staff. Staff and patients build different coping strategies that may be more or less successful. Highly trained hemodialysis staff have high expectations of dialysis success. There is also a high probability that these expectations will be disappointed, at least occasionally, either through: poor patient cooperation, aggressiveness, or deterioration of their somatic condition.

Even in modern business conditions for professional stress, one of the more modern terms in organizational psychology is burnout syndrome. This syndrome implies a state of mental and emotional exhaustion, which leads to reduced efficiency at work. Burnout occurs due to a mismatch of ambitions, ideas, goals, and tasks at work, excessive work, and/or poor interpersonal relationships, due to which a person becomes exposed to chronic stress. Burnout syndrome is the body's "response" to chronic stress at the workplace, and it denotes a process that occurs in a professional relationship. It is described as a series of physical and mental symptoms of exhaustion, i.e. as a delayed response to chronic emotional and interpersonal stressful events.

Conclusion: Nurses in hemodialysis are exposed to a number of stressogenic factors. Strategies to combat stress depend on individual personality structures, but also on the organization of the work of the dialysis unit. It is important that nurses believe in themselves and nurture their ideals without questioning their psychophysical condition.

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APSTRAKT 6S 2024; 5(1): 9–9 ABSTRACT 6E

Postoperativna inkontinencija kod muškaraca
Postoperative Incontinence in Men

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Apstrakt

Uvod: Stresna urinarna inkontinencija kod muškaraca je pretežno jatrogena. Veoma retko se javlja kod transureteralne resekcije prostate (TRUP) i transvezikalne prostatektomije (PTV), a kao najčešći uzrok izdvaja se radikalna prostatektomija. Iako se tehnika radikalne prostatektomije decenijama unapređivala, pacijenti su i dalje izloženi riziku od hirurških i posthirurških komplikacija.
Najčešće komplikacije uključuju urinarnu inkontinenciju i erektilnu disfunkciju.

Cilj: Prikazati prevenciju postoperativne inkontinencije kod muškaraca, kao i principe lečenja minimalno invazivnim procedurama.

Metoda: Korišćen je metod sistematskog prikaza istraživanja drugih istraživača koji je u skladu sa ciljem istraživanja. Pri izradi rada korišćena je deskriptivna metoda.

Rezultati: U radu će biti detaljno prikazana incidenca i faktori rizika koji dovode do postoperativne inkontinencije kod muškaraca. Prevencija podrazumeva sprovođenje preoperativnih vežbi mišićnog karličnog dna i preciznu hiruršku tehniku. Lečenje zahteva multidisciplinarni pristup koji određuju urolozi, fizioterapeuti i drugi zdravstveni radnici, što predstavlja standard lečenja urinarne inkontinencije posle radikalne prostatektomije. Konzervativno lečenje podrazumeva trening mišića karličnog dna i elektro-mišićnu stimulaciju karličnog dna visokofrekventnom strujom. Ako konzervativno lečenje ne daje rezultate, preporučuje se hirurško lečenje. Danas su dostupne različite opcije za hirurško lečenje stresne urinarne inkontinencije kod muškaraca. U radu će detaljno biti opisano hirurško lečenje minimalno invazivnim procedurama (slim procedure), kao i arteficijalni urinarni sfinkter, koji je, za sada, zlatni standard u lečenju postoperativne urinarne inkontinencije kod muškaraca.

Zaključak: Na osnovu dostupnih studija može se zaključiti da postoperativna urinarna inkontinencija kod muškaraca predstavlja ozbiljan hirurški problem. Vežbe karličnog dna su inicijalni tretman koji skraćuje vreme inkontinentnosti, dok balon-kompresija i sling procedure daju obećavajuće rezultate i znatno poboljšavaju kvalitet života muškaraca.

Abstract

Introduction: Stress urinary incontinence in men is predominantly iatrogenic. It occurs very rarely during transurethral resection of the prostate (TURP) and transvesical prostatectomy (PTV), and the most common cause is radical prostatectomy. Although the radical prostatectomy technique has improved over the decades, patients are still at risk of surgical and post-surgical complications.
The most common complications include urinary incontinence and erectile dysfunction.

Aims: To present the prevention of postoperative incontinence in men, as well as the principles of treatment with minimally invasive procedures.

Results: The paper will expound the incidence and risk factors that lead to postoperative incontinence in men. Prevention involves the implementation of preoperative pelvic floor muscle exercises and precise surgical techniques. Treatment requires a multidisciplinary approach determined by urologists, physiotherapists, and other health professionals, which is the standard treatment for urinary incontinence after radical prostatectomy. Conservative treatment involves pelvic floor muscle training and electrical muscle stimulation of the pelvic floor with high-frequency current. If conservative treatment fails, surgical treatment is recommended. Today, various options are available for the surgical treatment of stress urinary incontinence in men. The paper will describe in detail surgical treatment with minimally invasive procedures (slim procedures), as well as the artificial urinary sphincter, which is currently the gold standard in the treatment of postoperative urinary incontinence in men.

Conclusion: Based on the available studies, it can be concluded that postoperative urinary incontinence in men is a serious surgical problem. Pelvic floor exercises are the initial treatment that shortens the time of incontinence, while balloon compression and sling procedures promise results and significantly improve the quality of life of men.

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APSTRAKT 7S 2024; 5(1): 10–10 ABSTRACT 7E

Sindrom izgaranja u savremenom svetu
Burnout Syndrome in the Modern World

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Apstrakt

U svakodnevnom životu često se srećemo sa terminom stres. Rezultati brojnih istraživanja pokazali su da je veliki broj zaposlenih izložen stresnim situacijama, što za posledicu ima negativno delovanje na radne sposobnosti i na zdravlje. Zanimanja iz zdravstvene struke, kao i ona koja se odnose na spasilačke i interventne aktivnosti, spadaju u najugroženije i najopterećenije profesije, kada je u pitanju pojava visokog nivoa stresa, a simptomi stresa su kod 20–80% osoba produženog intenziteta.

Najčešći oblici stresa su mobing i sindrom izgaranja. Procenjuje se da je više od 75% bolesti prouzrokovano baš stresom.

Svetska zdravstvena organizacija proglasila je stres na radnom mestu svetskom epidemijom. Prema prikupljenim podacima, u Evropskoj uniji stresom na poslu obuhvaćeno je 41,2 miliona zaposlenih, od toga više žena nego muškaraca.

U savremenom svetu ovaj problem je jedan od vodećih i, svakako, oblast kojom se treba baviti sa više aspekata. Multidisciplinarni pristup bi bio od velike važnosti.

Ključne reči: sindrom izgaranja, savremeni svet, prevencija.

Abstract

In everyday life, we often come across the term “stress”. The results of numerous researches have shown that a large number of employees are exposed to stressful situations, which has a negative effect on working abilities and health, and that occupations of the branch of health, as well as members of rescue and intervention teams, are among the most threatened and burdened professions, which it results in a high level of stress, and the symptoms that occur in 20-80% are of prolonged intensity.

The most common forms of stress are mobbing and burnout syndrome. It is estimated that more than 75% of diseases are caused by stress.

The World Health Organization has declared workplace stress a global epidemic. According to the collected data, in the European Union, 41.2 million employees are affected by stress at work, of which there are more women than men.

In the modern world, this is one of the leading problems and certainly an area that should be dealt with from several aspects. A multidisciplinary approach of an organization would be of great importance.

Key words: burnout syndrome, modern world, prevention

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Bronhijalna astma teška za lečenje, teška astma i primena biološke terapije

Bronchial Asthma Difficult to Treat, Severe Asthma and Biological Therapy Use

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Apstrakt

Svedoci smo razvoja bolesti astme. Evolucija dijagnoze astme išla je od jedne jedinstvene bolesti do činjenice da je to kompleksna, heterogena bolest sa mnogobrojnim fenotipovima i endotipovima. Kroz istoriju, astmu smo sagledavali i klasifikovali na različite načine. Prva fenotipizacija odnosila se na ekstrinzik i intrinzik astmu, devedesetih godina javili su se klasteri sa ranim i kasnim početkom, pa sve do današnjih dana kada, na osnovu inflamacije u disajnim putevima, govorimo o Th2 high i Th2 low astmi (T2 i non T2 astmi). Klasifikacija astme išla je od kliničke do biloški fokusirane.

Paralelno sa razvojem definicije, dijagnoze i klasifikacije, evoluirala je i terapija. Pristup lečenju išao je od klasičnog, standardnog stepeničastog pristupa istog za sve, do personalizovanog, gde će se terapija davati pravom pacijentu u pravo vreme, pravi lek za pravu dijagnozu. Terapija će biti preventivna, prediktivna, personalizovana i participativna.

Po GINA smernicama bronhijalnu astmu lečimo na osnovu težine, i to u 5 koraka. Dijagnoza je retrospektivna, tj. bazirana je na tome kojom terapijom možemo postići i održati kontrolu simptoma astme, kao i smanjiti rizik od pogoršanja. Astma teška za lečenje može se susresti na svakom koraku lečenja, teška astma je prisutna samo na koraku 4 i 5.

U osnovi astme teške za lečenje i teške astme je nekontrolisana astma. Astma teška za lečenje je svaka nekontrolisana astma koja se javlja i pored primene sve preporučene terapije na koraku 4 ili 5. Ako smo ispoštovali terapijske modalitete, proverili tehniku inhalacije, adherencu, komorbiditete, faktore rizika, izvršili optimizaciju lečenja i ako i posle 3 meseca imamo nekontrolisanu astmu, onda možemo pričati o teškoj astmi. U tom slučaju pristupa se fenotipizaciji, na osnovu inflamacije u disajnim putevima, kada se određuju biomarkeri (br. eozinofila u perifernoj krvi, ukupni i specifični IgE, FeNo ...) i ukoliko se ispune kriterijumi, pristupa se aplikaciji biološke terapije (monoklonska antitela). Za sada je u našoj zemlji dostupna terapija za T2 inflamaciju u disajnim putevima (anti IgE – omalizumab, anti Il5 – reslizumab, i anti IL5 receptor – benralizumab). Rezultati primene ove vrste terapije gotovo da prevazilaze očekivanja u pogledu poboljšanja, simptoma, kvaliteta života, plućne funkcije, smanjanja egzacirbacija, korišćenja sistemskih KS.

Abstract

We are witnessing the development of asthma as a disease as a whole. The evolution of the diagnosis went from a single disease to the present day when we know that it is a complex, heterogeneous disease with numerous phenotypes and endotypes. Throughout history, asthma has been viewed and classified in different ways. The first phenotyping was related to extrinsic and intrinsic asthma, early and late-onset clusters in the 1990s, until today when, based on inflammation in the airways, we speak of Th2 high and Th2 low asthma (T2 and non-T2 asthma). Classification of asthma ranged from clinical to biologically focused.

In parallel with the development of definition, diagnosis, and classification, therapy has also evolved. The approach to treatment went from the classic, standard step-by-step approach, the same for everyone, to a personalized one where we will give therapy to the right patient in the right way, the right medicine for the right diagnosis. The therapy will be preventive, predictive, personalized, and participatory.

According to GINA guidelines, we treat bronchial asthma based on severity in 5 steps. The diagnosis is retrospective, i.e. based on which therapy we can achieve and maintain control of asthma symptoms, as well as reduce the risk of exacerbation. "Difficult to treat asthma" can be encountered at every treatment step, and "severe asthma" is only present at steps 4 and 5.

At the root of difficult-to-treat and severe asthma is uncontrolled asthma. Asthma that is difficult to treat is any uncontrolled asthma despite the application of all recommended therapy at steps 4 or 5. If we followed the therapeutic modalities, checked the inhalation technique, adherence, comorbidities, and risk factors, and optimized the treatment, and if we still have uncontrolled asthma after 3 months, then we can talk about severe asthma. In that case, phenotyping is approached on the basis of inflammation in the respiratory tract when biomarkers are determined (number of eosinophils in peripheral blood, total and specific IgE, FeNo...) and if they meet the criteria of access to the application of biological therapy (monoclonal antibodies). For the time being, therapy for T2 inflammation in the respiratory tract is available in our country (anti-IgE - Omalizumab, anti-Il5 - Reslizumab, and anti IL5 receptor - Benralizumab). The results of applying this type of therapy almost exceed expectations in terms of improvement,symptoms, quality of life, lung function, reduction of exacerbations, use of systemic skeletal system.

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Značaj funkcionalne dijagnostike u lečenju HOBP-a i astme

The Importance of Functional Diagnostics in the Treatment of COPD and Asthma

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Apstrakt

Uvod: HOBP se karakteriše ograničenim (smanjenim) protokom vazduha u disajnim putevima. Ograničenje protoka vazduha je progresivno i udruženo sa zapaljenjskom reakcijom pluća na štetne čestice ili gasove. Obolevaju pušači, bivši pušači, osobe koje rade sa štetnim isparenjima i prašinom. Dominantni simptomi su: kašalj, iskašljavanje, otežano disanje, gušenje.

Astma predstavlja hronično zapaljenjsko oboljenje disajnih puteva pluća koje dovodi do ponovljenih epizoda sviranja u grudima, gušenja i kašlja, koje se mogu javiti spontano tokom dana i noći, ali i nakon fizičkog zamaranja. Simptomi astme se ispoljavaju usled odgovora disajnih puteva na različite stumuluse. Astma može biti alergijska i nealergijska. Kako bi se adekvatno lečili i astma i HOBP, neophodno je postaviti pravu dijagnozu. Spirometrija je neophodna za postavljanje dijagnoze. Odnos FVC1/FEV < 0,70 posle bronhodilatacijskog testa, potvrđuje trajno ograničenje protoka vazduha kroz disajne puteve, što potvrđuje dijagnozu. RTG snimak pluća ne može potvrditi dijagnozu, ali može isključiti druge komorbiditete (tumore pluća, tbc pluća, pleuralni izliv). CT grudnog koša se ne preporučuje kao rutinska metoda, izuzev radi detekcije bronhiektazija ili postojanja rizika od karcinoma pluća, u diferencijalnoj dijagnozi nekih komorbiditeta, kao i u preoperativnoj proceni. Ponekad je ispitivanje potrebno dopuniti i nekim dopunskim testovima (bodipletizmografijom, difuzijom pluća, testovima fizičkog opterećenja), a saturacija oksi-hemoglobina utvrđuje se pomoću pulsnog oksimetra, a ako postoji poremećaj saturacije, rade se gasne analize. Spirometrija je metoda koja se rutinski radi u našoj ustanovi, kod skoro svih pacijenata (izuzev kod hemoptizija, tahikardije, jakog gušenja, kovid pozitivnih). Radi se na dolasku, neposredno pred odlazak, a po potrebi i češće. Spirometriju izvodi medicinska sestra u kabinetu za neinvazivnu dijagnostiku. Pacijentu objašnjava način rada i neophodnost saradnje u toku rada kako bi rezultat bio adekvatan.

Cilj rada: Ukazati na značaj dobro urađenog testa, a na osnovu koga će lekar postaviti dijagnozu, ordinirati terapiju i tako pacijentu olakšati tegobe.

Metoda rada: Prikaz slučaja iz prakse i upoređivanje spirometrije na dolasku i odlasku sa bolničkog lečenja.

Rezultati rada: Nakon 15 dana lečenja i primene ordinirane terapije, pacijent je bio sa minimalnim tegobama, a spirometrija je bila značajno bolja u odnosu na prvu (na dolasku).

Zaključak: Pravovremeno javljanje lekaru, dobro postavljena dijagnoza, adekvatna terapija, zdravstveno-vaspitni rad (prestanak pušenja, izbegavanje mesta gde se puši, vežbe disanja, vakcinacija protiv gripa) u lečenju HOBP-a i astme, neophodni su da bi se bolest držala pod kontrolom, a pacijent bio sposoban da obavlja svakodnevne poslove.

Abstract

Introduction: COPD is characterized by limited (reduced) airflow in the airways. The airflow limitation is progressive and associated with the inflammatory response of the lungs to harmful particles or gases. Smokers, ex-smokers, and people who work with harmful fumes and dust get sick. Dominant symptoms are cough, expectoration, hard breathing, and suffocation.

Asthma represents a chronic inflammatory disease of the airways of the lungs that leads to repeated episodes of wheezing, choking, and coughing, which can occur spontaneously during the day and night, but also after physical fatigue. Asthma symptoms are manifested due to the response of the airways to various stimuli. Asthma can be allergic or non-allergic. In order to adequately treat both asthma and COPD, it is necessary to establish the right diagnosis. Spirometry is essential for diagnosis. FVC1/FEV ratio <0.70 after a bronchodilation test confirms permanent limitation of airflow through the airways, which confirms the diagnosis. An X-ray of the lungs cannot confirm the diagnosis, but it can rule out other comorbidities (lung tumors, lung tuberculosis, pleural effusion). CT of the chest is not recommended as a routine method except for the detection of bronchiectasis or the existence of a risk of lung cancer and in the differential diagnosis of some comorbidities, then in the preoperative evaluation. Sometimes the examination needs to be supplemented with some additional tests (body plethysmography, lung diffusion, physical stress tests, oxyhemoglobin saturation is determined using a pulse oximeter, and if there is a saturation disorder, gas analyses are performed. Spirometry is a method that is routinely performed in our institution, with almost all patients (except for hemoptysis, tachycardia, severe suffocation, and covid-positive). It is performed upon arrival, immediately before departure, and more often if necessary. Spirometry is performed by a nurse in the non-invasive diagnostics office. She explains to the patient the way of working and the necessity of cooperation in the course of work so that the result is adequate.

The aim of the work: To point out the importance of a well-done test, on the basis of which the doctor will make a diagnosis, prescribe therapy, and thus relieve the patient's problems.

Method of work: Presentation of a case from practice and comparison of spirometry on arrival and departure from hospital treatment.

Results: After 15 days of treatment and application of prescribed therapy, the patient had minimal complaints and spirometry was significantly better compared to the first (on arrival).

Conclusion: Timely reporting to the doctor, a well-established diagnosis, adequate therapy, and health education work (smoking cessation, avoiding places where smoking, breathing exercises, flu vaccination) in the treatment of COPD and asthma are necessary to keep the disease under control. and the patient was able to perform daily tasks.

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APSTRAKT 10S 2024; 5(1): 13–13 ABSTRACT 10E

Uticaj smanjenog broja zaposlenih i premora usled protekle pandemije na organizaciju rada u laboratorijama

The Influence of the Decreased Number of Employees and Fatigue Due to the Past Pandemic on the Organization of Work in Laboratories

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Apstrakt

Uvod: Tema ovog okruglog stola je ukazati na evidentno smanjen broj laboratorijskih radnika i povećani obim posla, kao i naći adekvatno rešenje za ovu situaciju.

Cilj: Doći do određenih zaključaka, dati odgovor kako i na koji način se laboratorijski radnici nose sa pritiskom posla, kao i kako ih ogranizovati, usled povećanog obima istog.

Metod: Činjenica je da se poslednjih decenija znatan broj zdravstvenih radnika seli u inostranstvo i tamo nastavlja svoju profesionalnu karijeru. Zbog ovog i niza drugih okolnosti, broj zdravstvenih radnika uopšte, a naravno i laboratorijskih radnika, ne nadomešćuje se novim radnicima. Na sve ovo, Pandemija kovid-19 dovela je do velikog pritiska na zaposlene, do njihovog premora, što sve utiče na rad u laboratorijama, kao i na organizaciju posla.

Rezultati: Značajan broj radnika je nakon pandemije na bolovanju, značajan broj njih koristi zaostale godišnje odmore, što je priličan broj radnih dana kada nisu na poslu, a dodatni problem za organizaciju posla je i sve veća prisutnost sindroma sagorevanja.

Zaključak: Ministarstvo zdravlja bi trebalo nizom mera da pruži pomoć nosiocima zdravstvene zaštite u zemlji na taj način što će omogućiti zapošljavanje novih, mladih koleginica i kolega. Na taj način će dati šansu ne samo mladima da ostanu u zemlji, već i zrelim radnicima da učestvuju u obuci mladih kolega, što će biti jedna zajednička motivacija, a najveći benefit će imati pacijenti i država.

Abstract

Introduction: The topic of this round table is to point out the apparently reduced number of laboratory workers and the increased volume of work, as well as to find an adequate solution for this situation.

Aims: To reach certain conclusions, to give an answer as to how and in what way laboratory workers cope with the pressure of work, as well as how to limit them due to the increased amount of work.

Method: It is a fact that in recent decades, a significant number of health workers have moved abroad and continued their professional careers there. Due to this and a number of other circumstances, the number of health workers in general and of course laboratory workers is not being replaced by new workers. On top of all this, the arrival of the Covid-19 pandemic has led to great pressure on employees, their overtime, and everything affects the work in the laboratories as well as the organization of work.

Results: After the pandemic, a significant number of workers are on sick leave, also, a significant number of them are using their annual vacations, which is a considerable number of working days. The "burnout" syndrome is also present.

Conclusion: The Ministry of Health should, through a series of measures, provide assistance to healthcare providers in the country in a way that will enable the employment of new, young colleagues. In this way, it will give a chance not only young people to stay in the country, but also mature workers to participate in the training of young colleagues, which will be a common motivation, and the biggest benefit will be patients and the state.

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Sestrinstvo savremenog doba
Nursing of the Modern Age

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Apstrakt

Medicinske sestre/tehničari brinu o osobama kojima je potrebna medicinska nega zbog povreda, bolesti ili drugih fizičkih i mentalnih nedostataka ili usled potencijalnih rizika po zdravlje. Medicinski radnici nose i odgovornost za planiranje rukovođenja brige o pacijentima, radeći individualno ili u timovima sa doktorima na praktičnoj primeni preventivnih mera i mera izlečenja.

Delokrug rada medicinske sestre je veoma širok, od učenja dece kako da operu ruke i zube, ili savetovanja odraslih o očuvanju zdravlja i menjanju štetnih navika, do rukovođenja visokosofisticiranom medicinskom tehnologijom, kojom se unapređuje i čuva zdravlje. Medicinska sestra NE TREBA, VEĆ MORA biti stabilna i izgrađena ličnost, emocionalno zrela, sa izgrađenim stavovima, da bi mogla da razume ljudsku patnju, etičke nedoumice i da na pravi način reaguje kako bi sačuvala ljudski život, a samim tim i svoj i svojih kolega. Ona treba da radi samostalno, ali i timski, u saradnji sa drugim profesijama u zdravstvu.

Svakim danom (na globalnom nivou) medicinske sestre imaju sve više odgovornosti, javlja se potreba za njihovim bržim reagovanjem u određenoj situaciji, svakodnevnim suočavanjem sa ljudskim patnjama, smrću. Broj sestara u smenama je manji od potrebnog, što podrazumeva nedostatak vremena za planirano zbrinjavanje pacijenata, razgovor sa njima (nekada i sa porodicom), precizno vođenje sestrinske dokumentacije. Sve to dovodi do negativnih posledica po zdravlje, kao što su otuđenje, stres, bolest. Starosne granice za mnoge bolesti, nažalost, su pomerene. Sve više mladih ljudi oboleva od teških, neizlečivih bolesti. Treba sve to prihvatiti, procesuirati i nastaviti dalje, jer postoji život i van zdravstvenih ustanova. Poslovi medicinskih sestara prilagođavaju se posebnim potrebama pacijenata na različitim odeljenjima, i zbog toga postoje velike razlike u poslovima na hirurgiji, pedijatriji, endokrinologiji, ginekologiji, neurohirirgiji. Bez obzira na razlike u radu, svim medicinskim sestrama zajednička je posvećenost poslu i humanost.

Na sam kvalitet rada često utiču mesto zaposlenja, stanje u zdravstvenim ustanovama, uslovi rada, radno okruženje, smenski rad, rad vikendima, praznicima i mnogi drugi faktori na koje nekada možemo da utičemo, a nekada ne.

Kroz vekove nauka i tehnologija napreduju, a napredak se u medicini koristio na različite načine i to sve u cilju poboljšanja i unapređenja zdravlja. Nove tehnologije koje se danas brzo razvijaju, medicinskoj sestri omogućavaju lakši rad u očuvanju i unapređenju zdravlja. Međutim, određeni aparati koji se koriste u zdravstvu zahtevaju i posebno mesto i uslove za čuvanje, potrebno je naučiti kako se rukuje njima, a poseban je izazov i kako biti motivisan za sve to. Zato su potrebne i posebne edukacije koje treba da budu konstantne.

Abstract

Nurses look after people who need medical care because of injuries, illnesses, or other physical and mental disabilities or because of potential health risks. Medical professionals are also responsible for planning the management of patient care, working individually or in teams with doctors on the practical application of preventive and curative measures.

The scope of a nurse's work is wide, from teaching children to wash their hands and brush their teeth, and adults to preserve their health and change harmful habits, to handling highly sophisticated medical technology, which improves and preserves health. A nurse MUST have a stable and developed personality, be emotionally mature, with developed attitudes, in order to be able to understand human suffering, and ethical doubts and to react in the right way in order to preserve not only the patient`s life but also their colleagues` life and their own. They should work independently but also as a team in cooperation with other professions in healthcare.

Every day (on a global level), nurses have more and more responsibilities, the need to react faster in certain situations, and daily dealing with human suffering and death. The number of nurses in shifts is less than necessary, which implies a lack of time for planned care of the patient, conversation with them (sometimes also with the family), and accurate management of nursing documentation. All this leads to negative consequences such as detachment, stress, and illness. Unfortunately, the age limits for many diseases have been moved. More and more young people are suffering from serious, incurable diseases. You have to accept all that, process it, and move on because there is life outside of healthcare institutions. Nurses' jobs are adapted to the special needs of patients in different departments, and because of this, there are big differences in jobs in surgery, pediatrics, endocrinology, gynecology, and neurosurgery. Regardless of the differences in the work, what all nurses have in common is dedication to work and humanity.

The quality of work itself is often influenced by the place of employment, conditions in health care facilities, working conditions, environment, shift work, work on weekends, holidays, and many other factors that sometimes we can impact and sometimes we can't.

Throughout the centuries, science and technology have progressed. Advances in medicine have been used in various ways to improve health. New technologies that are rapidly developing today enable nurses to work more easily in preserving and improving health. Certain devices that are used require a special place and conditions for storage. You need to master all that technology and learn how it works, and you need to be motivated for all that. Special education is needed, which should be constant.

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Profesija sestrinstva uvek ima više ciljeve koje teži da ostvari. Moto kojim se sestre rukovode je *misli globalno*, *deluj lokalno*. Medicinske sestre nisu samo usredsređene na bolest, već i na unapređenje i promociju zdravog načina života.

The nursing profession always has higher goals that it strives to achieve. The motto that nurses are guided by is "think globally, act locally". Nurses are not only focused on illness but on the improvement and promotion of a healthy lifestyle.

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Značaj kontinuirane edukacije medicinskih sestara i tehničara u urgentnoj medicini

The Importance of Continuous Education of Nurses and Technicians in Emergency Medicine

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Apstrakt

Urgentna medicina je grana medicine koja se fokusira na tretman akutnog oboljenja koje zahteva trenutnu medicinsku pažnju. Zbog toga je veoma bitno da se medicinske sestre i tehničari, koji se bave urgentnom medicinom, kontinuirano edukuju, jer pravilnom primenom protokola u mnogim urgentnim stanjima, opasnost će biti svedena na minimum, postići će se izlečenje bez teških komplikacija i izbeći će se letalan ishod.

Kontinuirana edukacija medicinskih sestara i tehničara u urgentnoj medicini podrazumeva skup obrazovnih aktivnosti koje služe da se održe, razviju ili povećaju znanja, veštine i profesionalna dostignuća i to učešćem na stručnim i naučnim skupovima, seminarima, kursevima i drugim programima. Istraživanja jasno pokazuju da kontinuirana edukacija ima veliki uticaj na zdravstveni sistem i organizacionu strukturu uopšte. Smisao edukacije ide u prilog bolje organizacije i kvaliteta zdravstvenih usluga, kao i interpersonalnih odnosa na svim hijererhijskim lestvicama u menadžment sistemu zdravstvenih ustanova, na svim nivoima zdravstvene zaštite. Ona treba da bude planska, temeljna i tematski sprovedena, da obuhvati nedeljne, mesečne i godišnje aktivnosti, a sve u cilju dobijanja boljih rezultata rada. Pored dobrog poznavanja algoritama i protokola kod zbrinjavanja urgentnih stanja, vreme je važna karika u lancu zbrinjavanja, kao i standardizacija rada i opreme. Medicinske sestre i tehničari u urgentnoj medicini imaju jasnu i veoma važnu ulogu, pa je to još jedan od razloga da se kontinuiranom edukacijom povećava sigurnost u radu. U Velikoj Britaniji medicinska sestra i tehničar vođe su tima u zbrinjavanju urgentnih stanja. Medicinska sestra i tehničar treba da budu svesni situacije i da prate ostale članove tima, da koordiniraju radom i izdaju jasna, kratka uputstva, da donose odluke, da komuniciraju sa članovima tima, jer se u urgentnoj medicini stvari ne podrazumevaju. Pored tehničkih veština, veoma je važno raditi i na netehničkim veštinama, gde komunikacija zauzima značajno mesto. Razvoj urgentne medicine je u direktnoj vezi sa tehnološkim napredovanjem društva, pa se kontinuirana edukacija u urgentnoj medicini odnosi i na savladavanje teorijskog znanja i na vladanje mnogim manuelnim veštinama, kao i na rukovanje opreme koja se koristi.

Lanac preživljavanja je snažan, koliko je jaka i najslabija karika. Ljudski faktor je karika na kojoj se mora raditi, kontinuirano se edukovati, kako na tehničkim, tako i na netehničkim veštinama. Neophodno je raditi na planu i sprovođenju edukacije, a sve u cilju podizanja kvaliteta usuga koje pružamo u zdravstvu.

Abstract

Emergency medicine is a branch of medicine that focuses on the treatment of acute illnesses that require immediate medical attention. That is why it is very important that nurses and technicians who deal with emergency medicine are continuously educated, because with the correct application of protocols in many emergency situations, the danger will be reduced to a minimum, healing will be achieved without serious complications and a fatal outcome will be avoided.

Continuous education of nurses and technicians in Emergency Medicine includes a set of educational activities that serve to maintain, develop, or increase knowledge, skills, and professional achievements by participating in professional and scientific gatherings, seminars, courses, and other programs. Research clearly shows that continuous education has a great impact on the health system and the organizational structure in general. This is done for aiming to organization and quality of health services as well as interpersonal relations at all hierarchical levels in the management system of health institutions, at all levels of health care. It should be planned, fundamental, and thematically implemented. To include weekly, monthly, and annual activities, all for better work results. In addition to a good knowledge of algorithms and protocols when dealing with emergencies, time is an important link in the care chain, as is the standardization of work and equipment. Nurses and technicians in Emergency Medicine have a clear and very important role, so this is another reason to increase work safety through continuous education. In Great Britain, the nurse and the technician are the team leaders in emergency care. Nurses and technicians should be aware of the situation and monitor other team members, coordinate work and issue clear, short instructions, make decisions, and other team members communicate because things are not taken for granted in Emergency Medicine. In addition to technical skills, it is very important to work on non-technical skills where communication plays an important role. The development of Emergency Medicine is directly related to the technological progress of society, so continuous education in Emergency Medicine requires, in addition to mastering theoretical knowledge, mastery of many manual skills as well as handling of the equipment used.

The chain of survival is only as strong as the weakest link. The human factor is a link that must be worked on and continuously educated in both technical and non-technical skills. It is necessary to work on the plan and implementation of education, all in favor of raising the quality of the services we provide.

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Od planiranja porodice, preko antenatalne zaštite, do zdravog novorođenčeta

From Family Planning through Antenatal Protection to a Healthy Newborn

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Apstrakt

Planiranje porodice je svesna delatnost individue i parova u reproduktivnom dobu života kojom teže ne samo da regulišu broj i vremenski raspored rađanja, već i da rode zdravo dete i da kvalitetno ostvare sve svoje uloge tokom životnog ciklusa. Planiranje porodice obuhvata različite aspekte – biološke, zdravstvene, demografske, sociološke, psihološke, ekonomske, etičke, političke, a sa stanovišta nosilaca pojavljuje se na tri nivoa: kao individualna praksa, kao pokret društvenih grupa i kao program za planiranje porodice koji donosi država.

Civilizacijskim dostignućem smatra se osnovno pravo svih parova i pojedinaca da slobodno i odgovorno odluče o broju i razmaku rađanja dece, kao i da imaju pravo na informacije, obrazovanje i sredstva da to učine. Koncept „planiranja porodice" („family planning") zamenio je koncept „kontrole rađanja" („birth control"), kao savremeniji i bolji, na Drugoj svetskoj konferenciji o stanovništvu, koja je održana u Beogradu, 1965. godine.

Trudnoća predstavlja značajan događaj u životu žene i celokupne porodice. To je fiziološko stanje koje dovodi do brojnih promena u organizmu buduće majke, kako u fizičkom, tako i u psihičkom nivou. Kako bi sve proteklo u najboljem redu i bez neželjenih sekvenci, neophodno je redovno i adekvatno praćenje toka trudnoće. Kako se od embriona prati plod, njegov rast i razvoj do samog porođaja, tako se uporedo prati i zdravlje buduće majke. Nizom pregleda koji se obavljaju u određenom vremenskom intervalu mogu se uočiti potencijalni rizici, a samim tim i izbeći nepoželjan ishod trudnoće.

Cilj rada je da prikaže zdravstveni tim koji se svakodnevno bori sa raznim iskušenjima. U sredini u kojoj trudnica i buduća majka živi, značajno mogu uticati na razvoj i tok trudnoće budućeg deteta u razvoju različiti faktori rizika. Faktori rizika su karakteristike ili događaji čija prisutnost u antenatalnom periodu statistički ukazuje na verovatnoću da može doći do razvoja poremećaja u rastu i razvoju deteta, odnosno da će nastati nepovoljni ishod po zdravlje majke i deteta. Način i uslovi života utiču na sve, posebno na osetljive grupe u koju spadaju i trudnice. Sve učestalija je pojava patoloških i visokorizičnih trudnoća koje zahtevaju specifične metode i mere.

Glavni zadaci zdravstvenih radnika u zaštiti zdravlja u trudnoći su:
– praćenje zdravstvenog stanja trudne žene i ploda,
– pravovremeno identifikovanje trudnoće sa visokim rizikom (koja zahteva posebnu brigu za majku i plod),
– svim trudnim ženama pružiti podršku, dati odgovarajuće savete i informacije o promenama u trudnoći.

Abstract

Family planning is a conscious activity of individuals and couples in the reproductive age of life, in which they strive to not only regulate the number and timing of births but also to give birth to a healthy child and to fulfill all their roles during the life cycle. Family planning includes various aspects - biological, health, demographic, sociological, psychological, economic, ethical, and political, and from the point of view of the holders, it appears on three levels: as an individual practice, as a movement of social groups and as a family planning program brought by the state.

The basic right of all couples and individuals to freely and responsibly decide on the number and period between births of children, as well as the right to information, education, and means to do so, is considered a civilizational achievement. The concept of "family planning" replaced the concept of "birth control" as more modern and better at the Second World Population Conference, which was held in Belgrade in 1965.

Pregnancy is a significant event in the lives of women and the entire family. It is a physiological condition that leads to numerous changes in the future mother's body, both physically and psychologically. In order for everything to go smoothly and without unwanted sequences, regular and adequate pregnancy monitoring is necessary. As the fetus, its growth and development are monitored from the embryo to the birth itself, the health of the future mother is also monitored at the same time. Through a series of examinations performed at a certain time interval, potential risks can be observed and therefore an undesirable pregnancy outcome can be avoided.

The goal of the work is to show the healthcare team that struggles with various temptations every day. In the environment in which the pregnant woman and future mother live, various risk factors can significantly affect the development and course of the pregnancy of the developing future child. Risk factors are characteristics or events whose presence in the antenatal period statistically indicates the probability that a disorder in the growth and development of the child may occur, that is, that an unfavorable outcome for the health of the mother and child will occur. The way and conditions of life affect everyone, especially sensitive groups that include pregnant women. The occurrence of pathological and high-risk pregnancies that require specific methods and measures is becoming more frequent.

The main tasks of health workers in the protection of health during pregnancy are:
– monitoring the health condition of the pregnant woman and the fetus,

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Planirana i sistematična primena mera prevencije u antenatalnom životnom razdoblju žene u velikom procentu smanjuje incidencu morbiditeta u trudnoći i značajno povećava broj uspešno završenih trudnoća. Uloga sistema zdravstvene zaštite u antenatalnoj zaštiti je da obezbedi dostupnu i kvalitetnu zaštitu seksualnog i reproduktivnog zdravlja žena, koja je zasnovana na dokazima, bilo da se radi o obezbeđivanju dostupne i kvalitetne zdravstvene zaštite za trudnice i porodilje, prevenciji polno prenosivih infekcija i slično.

– timely identification of high-risk pregnancy (which requires special care for mother and fetus),
– to provide support to all pregnant women, and give appropriate advice and information about changes during pregnancy.

Planned and systematic implementation of prevention measures in the antenatal period of a woman's life significantly reduces the incidence of morbidity in pregnancy and significantly increases the number of successfully completed pregnancies. The role of the health care system in antenatal care is to provide affordable and high-quality protection of women's sexual and reproductive health, which is based on evidence, whether it is about providing affordable and quality health care for pregnant women and women giving birth, prevention of sexually transmitted infections, and so on.

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APSTRAKT 14S 2024; 5(1): 19–20 ABSTRACT 14E

Zdravstvena nega dece i adolescenata
Healthcare of Children and Adolescents

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Apstrakt

Nega bolesnika se prožima kroz istoriju i datira još od postanka čovečanstva, pa do danas. Spominje se u crkvenim knjigama i drugim spisima, ali ne kao veština ili nauka, već kao delatnost koja je bila rezervisana za monaštvo, kao i za žene, tj. majke i časne sestre. Nega je prvo bila delatnost, pa veština, da bi krajem dvadesetog veka postala naučna disciplina. Florens Najtingejl zasigurno je jedna od najznačajnih žena u istoriji sestrinstva, medicine, pa i društva uopšte, jer sa njom počinje razvoj sestrinske profesije koja ima kontinuitet do današnjih dana. Pedijatrijska sestra je ona u čijim rukama počinje život, briga i nega novog života.

Pedijatrijska nega i terapija je multidisciplinarna jedinica koja zbrinjava novorođenčad, odojčad, decu i adolescente na svim nivoima zdravstvene zaštite. Pedijatrijska sestra gradi efektivno partnerstvo sa porodicom, odnos u kome se učesnici udružuju da pruže zdravstvenu negu tako što prepoznaju ključnu ulogu svakog partnera i doprinose promovisanju zdravlja i sprečavaju bolesti. Partneri u nezi deteta su: dete, porodica, zdravstveni radnici i društvo. Pedijatrijska sestra podstiče komunikaciju usmerenu ka porodici, pokazujući zainteresovanost za dete i porodicu, efektivno izražavajući informacije i razumevanje.

Pedijatrijska sestra se usredsređuje na teme zdravstvene promocije i održavanja zdravlja tokom poseta, prepoznajući situaciju gde porodica neće započeti razgovor na te teme, te ih ona mora inicirati. Pedijatrijska sestra dobro upravlja vremenom kako bi omogućila da se tokom poseta bavi temama zdravstvene promocije, podrazumeva pregledanje detetovog zdravstvenog kartona i odabiranje tema za detetovo doba i situaciju porodice. Pedijatrijska sestra obrazuje porodicu tokom „trenutaka za podučavanje", deca i porodica često najbolje uče kada im se predoči malo podataka zasnovanih na pitanjima roditelja ili na njenim zapažanjima.

Pedijatrijska sestra postaje zastupnik zdravstvenih problema deteta, kada se problem pojavi, budući da ona brine o detetu. Ona treba da potraži dodatne podatke iz različitih izvora, treba da priča i sa drugima, a onda napravi strategiju kako da problem reši i izradi plan zdravstvene nege.

Nivoi rada pedijatrijske sestre u sistemu zdravstvene zaštite RS:
– *Primarna prevencija* ima za cilj da smanji incidencu obolevanja i odsustvovanja od zdravlja, primer: imunizacija, podučavanje o bezbednosti u kolima.
– *Sekundarna prevencija* ima za cilj da smanji prevalencu skraćivanja trajanja bolesti (rana dijagnoza i lečenje bolesti kako bi se umanjila njena ozbiljnost), primer: razvojni skrining, oftalmološki i slušni skrining.
– *Tercijarna prevencija* ima za cilj da smanji komplikacije bolesti. Povratak u normalno – optimalno funkcionisanje, primer: rehabilitacione aktivnosti za dete nakon saobraćajnog udesa.

Abstract

The care of the sick spreads throughout history and dates back to the beginning of mankind until today. It is mentioned in church books and other writings, but not as a skill or a science, but as an activity that was reserved for monasticism, as well as for women, i.e. mothers and nuns. Nursing was first an activity, then a skill, to become a scientific discipline at the end of the twentieth century. Florence Nightingale is certainly one of the most significant women in the history of nursing, medicine, and society in general because it was with her that the development of the nursing profession began, which continues to this day. A pediatric nurse is the one in whose hands, life, the care and nurturing of a new life, begins.

Pediatric care and therapy are a multidisciplinary unit that care for newborns, infants, children, and adolescents at all levels of health care. The pediatric nurse builds an effective partnership with the family, a relationship in which participants join together to provide health care by recognizing the critical role of each partner and contributing to health promotion and disease prevention. Partners in child care are the child, the family, health workers, and society.

The pediatric nurse encourages family-centered communication, showing interest in the child and family, and effectively expressing information and understanding.

The pediatric nurse focuses on the topics of health promotion and health maintenance during the visits, recognizing the situation where the family will not start a conversation on these topics, and she must initiate them. The pediatric nurse manages time well to enable her to deal with health promotion topics during the visits, which includes reviewing the child's health record and selecting topics for the child's age and the family's situation. The pediatric nurse educates the family during "teaching moments," children and families often learn best when presented with small amounts of information based on the parent's questions or her observations.

A pediatric nurse becomes an advocate for a child's health problems, when a problem arises, since the nurse takes care of the child, she needs to look for additional information from different sources, she needs to talk with others, and then make a strategy on how to solve the problem, creating a health care plan care.

Work levels of pediatric nurses in the health care system of the Republic of Serbia:
– *Primary prevention* - aims to reduce the incidence of illness and absence from health, for example, immunization and teaching about car safety.
– *Secondary prevention* - aims to reduce the prevalence of shortening the duration of the disease (early diagnosis and treat-

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Biti pedijatrijska sestra znači nesebično pružanje podrške tokom rasta i razvoja deteta, pomoći deci u toku lečenja i rehabilitacije u cilju kraćeg trajanja bolesti i bržeg izlečenja.

Uspeh rada medicinske sestre ne zavisi samo od njene humanosti i sposobnosti savladavanja savremene tehnologije. On zavisi i od trajne edukacije medicinske sestre. Zato je danas, u vremenima svakodnevnih promena, neophodno okrenuti se napretku profesije sestrinstva upravo kroz trajno učenje u programima kontinuirane edukacije.

Uspeh sestrinstva u Srbiji najviše zavisi od vizije budućnosti ove jedinstvene profesije.

ment of the disease in order to reduce its severity), for example, developmental screening; ophthalmological and hearing screening.
– *Tertiary prevention* - aims to reduce the complications of the disease. Return to normal - optimal functioning, for example, rehabilitation activities for a child after a traffic accident.

Being a pediatric nurse means selflessly providing support during the child's growth and development, helping children during treatment and rehabilitation with the aim of shortening the duration of the illness and faster healing.

The success of a nurse's work does not depend only on her humanity and ability to master modern technology. It also depends on the continuous education of the nurse. That is why today, in times of daily changes, it is necessary to turn to the progress of the nursing profession precisely through permanent learning in continuing education programs.

The success of nursing in Serbia mostly depends on the vision of the future of this unique profession.

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APSTRAKT 15S 2024; 5(1): 21–21 ABSTRACT 15E

Nasilje u porodici
Domestic Violence

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Apstrakt

Nasilje u porodici predstavlja značajan društveni problem. Nasilje u porodici ima duboke posledice kako na pojedince, tako i na zajednicu u celini. Sveobuhvatan pregled različitih aspekata nasilja u porodičnom okruženju, uključujući različite oblike nasilja, faktore koji doprinose njegovoj pojavi, omogućava rešavanje posledica po žrtve i moguće intervencije.

Kao oblik nasilja, fizičko nasilje obuhvata fizičke povrede i povrede integriteta; emocionalno nasilje uključuje ponižavanje, pretnje i manipulaciju; seksualno nasilje podrazumeva prisilu na seksualne aktivnosti, dok ekonomsko nasilje obuhvata kontrolu nad finansijama i resursima žrtve. Svi ovi oblici nasilja ostavljaju trajne emocionalne, fizičke i socijalne posledice na žrtve.

Faktori koji doprinose nasilju u porodici su mnogobrojni i složeni. Socijalni faktori, poput siromaštva i nezaposlenosti, mogu povećati tenzije unutar porodice. Kulturne norme koje podržavaju patrijarhalnu hijerarhiju, takođe, mogu doprineti nasilju. Psihološki faktori, uključujući nisko samopouzdanje i bespomoćnost, takođe igraju značajnu ulogu.

Posledice nasilja u porodici su duboko štetne i mogu se manifestovati na fizičkom, emocionalnom i socijalnom nivou. Žrtve često pate od povreda, anksioznosti, depresije i problema u međuljudskim odnosima. Negativna iskustva dodatno smanjuju integritet i kvalitet života žrtava.

Prevencija i intervencija su ključne za suzbijanje nasilja u porodici. Zakonodavstvo koje štiti žrtve, edukacija o nasilju i podizanje svesti o ovom problemu igraju važnu ulogu. Podrška žrtvama pruža siguran prostor i resurse za one koji su preživeli nasilje.

Abstract

Domestic violence is a significant social problem. It has profound consequences for both individuals and the community as a whole. A complete review of the various aspects of violence in the family environment, including various forms of violence, and factors that contribute to its occurrence, allows for addressing the consequences for the victims and possible interventions.

As a form of violence, physical violence includes physical injuries and violations of integrity, emotional violence includes humiliation, threats, and manipulation, sexual violence includes coercion into sexual activities, while economic violence includes control over the victim's finances and resources. All these forms of violence leave lasting emotional, physical, and social consequences on the victims.

The factors that contribute to domestic violence are numerous and complex. Social factors, such as poverty and unemployment, can increase tensions within the family. Cultural norms that support a patriarchal hierarchy can also contribute to violence. Psychological factors, including low self-esteem and helplessness, also play a significant role.

The consequences of domestic violence are deeply damaging and can manifest on a physical, emotional, and social level. Victims often suffer from injuries, anxiety, depression, and interpersonal problems. Negative experiences further reduce the integrity and quality of their lives.

Prevention and intervention are key to combating domestic violence. Legislation that protects victims, education about violence, and raising awareness about the problem play an important role. Victim support provides a safe space and resources for those who have gone through violence.

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Sindrom sagorevanja na poslu
Burnout Syndrome at Work

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Apstrakt

Sindrom sagorevanja na poslu definisan je kao postepen gubitak motivacije i kao emocionalna istrošenost koja nastaje na radnom mestu usled posebnih zahteva radnog mesta, individualnih osobina i očekivanja samog radnika, kao i rezultata rada koji nisu u skladu sa uloženim naporima. Posledica toga su emocionalna iscrpljenost, depersonalizacija i doživljaj umanjenog ličnog postignuća kod radnika.

Simptomi ovog sindroma su iscrpljenost, nesanica, glavobolja, visok pritisak, pad imuniteta, osećaj praznine, poremećaj koncentracije, zaboravljanje, nervoza, preosetljivost, stres.

Stres predstavlja napetost, umor i pritisak. Stres je uzročnik za oboljenja srca i direktno je povezan sa drugim bolestima kao što su: povišeni krvni pritisak, depresija, migrena, groznica, kolitis, zamor, čir, alergije, zgrušavanje krvi, a odnedavno i karcinoma. Stres je odgovor organizma na situaciju koju osoba doživljava kao ugrožavajuću po svoj telesni ili psihički integritet. Organizam se u stresu priprema na brzu reakciju i zaštitu, na primer: ubrzava se rad srca i pluća, raste krvni pritisak, mišićna napetost. Psihičke reakcije su: strah, promena pažnje, rasuđivanja, osećaja.

Izvori stresa ili stresori su spoljašnja zbivanja ili unutrašnji podsticaji koje procenjujemo kao ugrožavajuće. Izvori stresa: fizički – izloženost jakoj buci, vrućini, hladnoći, bolu. Psihološki – sukobi sa članovima porodice, prijateljima, kolegama na poslu. Socijalni – ekonomske krize, ratovi, poplave.

Reakcije na stres zavise od dužine njegovog trajanja i jačine. Stres može biti: akutni (jak iznenadan), hronični (posledica trajne izloženosti stresnoj situaciji), mali svakodnevni stresovi, veliki životni stresovi, traumatski životni stresovi.

Kako bismo sprečili ili ublažili stres, ponekad možemo promeniti samo stresnu situaciju, a ponekad svoj odnos na situaciju:
– zadržati osećaj za humor;
– održati ravnotežu između rada i zabave;
– usporiti;
– pronaći vreme za opuštanje;
– podeliti probleme sa prijateljima i porodicom;
– poznavati sebe i svoje granice tolerancije na stres;
– zatražiti savet od stručne osobe.

Zbog stresa na poslu u Evropi se dogodi 5 miliona nesreća na poslu, pola miliona pokušaja samoubistva i 48 hiljada samoubistva. Istraživanja pokazuju da oko 2/3 građana Srbije ili više od 60% pati od hronične iscrpljenosti uzrokovane stresom na poslu.

Najugroženije profesije su one koje su primarno usmerene na rad sa ljudima kao što su: lekari, medicinsko osoblje, socijalni radnici.

Abstract

Burnout syndrome at work is defined as a gradual loss of motivation and emotional exhaustion, which occurs in the workplace due to special requirements of the workplace, individual characteristics and expectations of the worker, as well as work results that are not in agreement with the efforts made. The result is emotional exhaustion, depersonalization, and the experience of reduced personal achievement in workers.

The symptoms of this syndrome are exhaustion, insomnia, headache, high pressure, decreased immunity, feelings of emptiness, concentration disorder, forgetfulness, nervousness, hypersensitivity, and stress.

Stress represents tension, fatigue, and pressure. Stress is the cause of heart disease and is directly related to other diseases such as high blood pressure, depression, migraine, fever, colitis, fatigue, ulcers, allergies, blood clotting, and recently cancer. Stress is the body's response to a situation that a person perceives as threatening their physical or psychological integrity. Under stress, the body prepares for a quick reaction and protection, for example: the heart and lungs work faster, blood pressure increases, and muscle tension increases. Psychic reactions are fear, change of focus, judgment, and feeling.

Sources of stress or stressors are external events or internal stimuli that we evaluate as threatening. Sources of stress: physical - exposure to loud noise, heat, cold, pain. Psychological - conflicts with family members, friends, and colleagues at work. Social - economic crises, wars, floods.

Reactions to stress depend on its duration and intensity. Stress can be acute (strong sudden), chronic (result of permanent exposure to a stressful situation), small daily stresses, major life stresses, or traumatic life stresses.

To prevent or relieve stress, sometimes we can change only the stressful situation, and sometimes our attitude towards the situation:
– Keep a sense of humor
– Maintain a balance between work and fun
– Slow down
– Find time to relax
– Share problems with friends and family
– Know yourself and your limits of stress tolerance
– Ask for advice from an expert

Due to stress at work, 5 million accidents at work, half a million suicide attempts, and 48 thousand suicides occur in Europe. Research shows that about 2/3 of Serbian citizens or more than 60% suffer from chronic exhaustion caused by stress at work.

The most threatened professions are those that are primarily focused on working with people, such as doctors, medical staff, and social workers.

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Značajan uticaj na psihičko stanje zaposlenih u zdravstvu u poslednje dve godine imali su novi uslovi rada zbog epidemije virusa korona. Pandemija je doprinela dodatnom stresu na poslu koji prijavljuje čak 63% zaposlenih. Strah od nepoznatog virusa, drastično veći broj pacijenata i njihovo često umiranje, uprkos uloženom trudu, promena radnog okruženja, fizička iscrpljenost, teški uslovi za rad, povećani stres, anksioznost, depresija, probelmi su sa kojima se suočavaju zdravstveni radnici od početka pandemije. Uprkos dužem trajanju pandemije „sagorevanje" na poslu se nije pojačalo, već su se zdravstveni radnici navikli na novonastali stres.

Edukacioni programi sadrže metode i tehnike upravo za prevazilaženje stresa na najbolji mogući način. Svetska zdravstvena organizacija uvrstila je stres na radnom mestu u 11. izdanje priručnika Međunarodne klasifikacije bolesti i najavila da će sindrom izgaranja na poslu od 2022. godine postati dijagnoza, što praktično znači da će zbog premora na poslu zaposleni i zvanično moći da dobijaju bolovanje.

The new working conditions due to the Coronavirus epidemic have had a significant impact on the mental state of healthcare workers in the last two years. The pandemic has contributed to additional stress at work, reported by as many as 63% of employees. Fear of an unknown virus, a dramatically higher number of patients and their frequent deaths despite the effort put in, a change in the work environment, physical exhaustion, difficult working conditions, increased stress, anxiety, and depression, are the problems faced by healthcare workers since the beginning of the pandemic. Despite the longer duration of the pandemic, "burnout" at work did not increase, but health workers got used to the new stress.

Educational programs contain methods and techniques precisely for overcoming stress in the best possible way. The World Health Organization included stress at the workplace in the 11th edition of the manual of the International Classification of Diseases and announced that burnout syndrome at work will become a diagnosis in 2022, which basically means that employees will officially be able to receive sick leave due to work fatigue.

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Bezbednost i zdravlje na radu u zdravstvenim ustanovama
Occupational Safety and Health in Healthcare Institutions

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Apstrakt

Uvod: Zdravstveni radnici u svome radu, kroz lečenje i brigu o bolesnicima, suočavaju se sa brojnim opasnostima i štetnostima na radnom mestu. Posledica njihovog dejstva su povrede na radu, različita profesionalna oboljenja, kao i oboljenja u vezi sa radom.

Cilj: Osnovni cilj bezbednosti i zdravlja na radu jeste sprečavanje i svođenje na minimum povrede i profesionalnih oboljenja kroz: upoznavanje opasnosti i štetnosti na radnom mestu kako bi se na vreme sprovele mere zaštite, uvođenje preventivnih mera, uspostavljanje odgovornosti poslodavca.

I pored visoke stope povreda i bolesti među zdravstvenim radnicima, ovom problemu nije posvećeno dovoljno pažnje od strane stručnjaka koji se bave ovom oblašću, u poređenju sa radnicima zaposlenim u industrijama, koji se tradicionalno smatraju rizičnim.

Zaključak: Postoji veliki broj pravnih akata koji regulišu ovu oblast bezbednosti i zdravlja na radu u zdravstvenim ustanovama. Neophodno je doneti nove i dopuniti sadašnje zakone, organizovati seminare, okrugle stolove, naučno-istraživačke skupove sa temama iz ove oblasti, a koje bi uključivale sve kategorije zaposlenih u zdravstvu (uključujući i privatni sektor), pacijente, advokate, razvijati programe koji će se fokusirati na mere u eliminisanju nasilja na radnom mestu uz učešće sindikata, poslodavaca i raznih profesionalnih strukovnih organizacija.

Abstract

Introduction: Health workers in their work, through the treatment and care of the sick, face numerous dangers and harms in the workplace. The result of their effects is injuries at work, various professional diseases as well as diseases related to work.

Aims: Therefore, the basic goal of safety and health at work is to prevent and minimize injuries and occupational diseases by familiarizing yourself with dangers and hazards in the workplace in order to implement protective measures in time, introduce preventive measures, and establish the employer's responsibility.

Despite the high rate of injury and illness among healthcare workers, this issue has received insufficient attention from professionals in the field compared to workers employed in industries traditionally considered at risk.

Conclusion: There are a large number of legal acts that regulate this area of occupational safety and health in healthcare institutions. It is necessary to enact new and supplement current laws, organize seminars, round tables, and scientific research gatherings with topics from this field, which would include all categories of healthcare workers (including the private sector), patients, lawyers and develop programs that will focus on measures to eliminate workplace violence with the participation of trade unions, employers, and various professional organizations.

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APSTRAKT 18S 2024; 5(1): 25–25 ABSTRACT 18E

Rehabilitacija nakon ugradnje endoproteze kuka
Rehabilitation After Installation of Hip Endoprosthesis

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Apstrakt

Uvod: Zglob kuka jedan je od najvećih zglobova u čovečjem organizmu. Građen je po tipu kugličnog zgloba i sačinjen od butne kosti i karlice. Snažan kapsuloligamentarni aparat i jaka muskulatura omogućavaju mu maksimalnu pokretljivost u svim pravcima. Zglob kuka je podložan degenerativnim promenama, koje se manifestuju bolom i ograničenom pokretljivošću. Kada se iscrpu sve mogućnosti medikamentoznog i balneofizikalnog lečenja, pristupa se operativnom zahvatu, gde iskusan tim stručnjaka, sa velikim uspehom, oslobađa bolesnike bola i teške invalidnosti, ugradnjom endoproteze.

Cilj rada je pokazati da pravilna i pravovremena rehabilitacija pomaže da pacijenti što pre ustanu iz kreveta, oslone se na operisanu nogu i izbegnu kompikacije dugog ležanja, što ovim bolesnicima veoma često ugrožava život.

Metodologija: Da bi rehabilitacija bila uspešna, potrebno je za svakog pacijenta napraviti poseban plan i program lečenja, što zavisi od prirode oboljenja ili povrede kuka, vrste operacije koja je izvedena, starosne dobi bolesnika, telesne težine, pridruženih bolesti i opšte kondicije bolesnika. Rehabilitacija se sprovodi timski i mora biti realna i sveobuhvatna. Najznačajnije mesto u rehabilitaciji ovih bolesnika zauzima kineziterapija, koja se sprovodi po principima: od lakšeg ka složenijem, od prostog ka napornijem; vreme vežbanja se postepeno produžava, pauze su sve kraće. Sa vežbama se kreće nultog dana od operacije. U početku su to vežbe disanja i statičke kontrakcije za operisanu nogu i aktivne vežbe za zdravu nogu. Pacijent postepeno prelazi u sedeći položaj, ustaje pored kreveta, pravi prve korake uz pomoć hodalice, kasnije prelazi na hod sa štakama, štapom i bez pomagala. Osim ovoga, fizioterapeut ima zadatak da obuči pacijenta aktivnostima svakodnevnog života, kako bi on i nakon ovog hirurškog zahvata mogao da se vrati svojim normalnim aktivnostima u porodici, na radnom mestu i društvu.

Rezultati: Rezultati su pokazali da kod bolesnika, kod kojih se rehabilitacija sprovodi po principima: pacijent je subjekt, a ne objekt rehabilitacije, rehabilitacija mora biti rana, litacija mora biti rana, sprovodi se timski, mora biti dovoljno duga, sveobuhvatna i realna i koji se pridržavaju mera predostrožnosti nakon ugradnje endoproteze kuka, ređe dolazi do komplikacija ili ispadanja zgloba kuka.

Zaključak: Pravilna i pravovremena rehabilitacija dovodi do povećanja obima pokreta, jačanja mišićne snage, poboljšanja šeme hoda sa pomagalom i kasnije bez njega. Edukacija bolesnika o zaštitnim položajima poboljšava kvalitet života naših bolesnika i vraća ih normalnom načinu života nakon ugradnje endoproteze, što ima i veliki psihološki efekat.

Abstract

Introduction: The hip joint is one of the largest joints in the human body. It is built according to the type of ball joint and is made of the femur and pelvis. A strong capsuloligamentary apparatus and strong musculature allow it to have maximum mobility in all directions. The hip joint is subject to degenerative changes, which are manifested by pain and limited mobility. When all the possibilities of medicinal and balneophysical treatment are exhausted, an operative intervention is approached, where an experienced team of experts, with great success, relieves patients of pain and severe disability by installing an endoprosthesis.

The work aims to show that proper and timely rehabilitation helps these patients get out of bed as soon as possible, lean on the operated leg, and avoid the complications of lying down for a long time, which very often endangers the lives of these patients.

Methodology: For the rehabilitation to be successful, it is necessary to make a special treatment plan and program for each patient, which depends on the nature of the hip disease or injury, the type of surgery performed, the patient's age, body weight, associated diseases and the general condition of the patient. Rehabilitation is carried out as a team and must be realistic and comprehensive. The most important place in the rehabilitation of these patients is occupied by kinesitherapy, which is carried out according to the principles: from easier to more complex, from simple to more strenuous, the exercise time is gradually extended, the breaks are shorter and shorter. Exercises are started on the zero day after the operation. Initially, these are breathing exercises and static contractions for the operated leg and active exercises for the healthy leg. The patient gradually moves to a sitting position, gets up next to the bed, takes the first steps with the help of a walker, and later moves to walk with crutches, a cane, and without aids. In addition to this, the physiotherapist has the task of training the patient in activities of daily life, so that he can return to his normal activities in the family, workplace, and society even after this surgical procedure.

Results: The results showed that in patients, in whom rehabilitation is carried out according to the principles: the patient is the subject and not the object of rehabilitation, rehabilitation must be early, rehabilitation must be early, it must be carried out as a team, it must be long enough, comprehensive and realistic, and which if the precautions are followed after the installation of the hip endoprosthesis, complications or dislocation of the hip joint occur less often.

Conclusion: Rules and timely rehabilitation lead to an increase in range of motion, strengthening of muscle strength, and improvement of walking pattern with and later without aids. Patient education in protective positions improves the quality of life of our patients and returns them to a normal way of life after endoprosthesis installation, which also has a great psychological effect.

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APSTRAKT 19S 2024; 5(1): 26–27 ABSTRACT 19E

Kvalitet života kod tinitusa
Quality of Life with Tinnitus

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Apstrakt

Veoma čest simptom u orl ordinaciji je tinitus. Pacijenti ga opisuju kao zujanje u ušima i predstavlja im veoma veliki mentalni i emocionalni problem, remeti pamćenje i koncentraciju, ometa ih u svakodnevnom životu, izaziva loše raspoloženje i strah. Reč tinitus je latinskog porekla i prevodi se kao „zvoniti ili zveckati", a može se manifestovati u različitim oblicima percepcije zvuka kao: zvonjenje, zviždanje, cvrkutanje, šuštanje itd.

Zujanje u ušima je jedan od čestih simptoma u ordinaciji opšte prakse i jedan od najčešćih kod orl specijaliste. Uz dobru i iscrpnu anamnezu, kompletan i temeljan pregled, ispitivanje sluha (audiometrija), ispitivanje srednjeg uva (timpanometrija), i uz konsultaciju neurologa, interniste, fizijatra, određuju se smernice za lečenje tinitusa. Postoje dve vrste tinitusa: subjektivni, što je zapravo šum u glavi i ušima koji čuje samo pacijent (najčešći u 99% slučajeva) i objektivni, koji može čuti i druga osoba u njegovoj blizini. Za objektivni šum postoje konkretni razlozi, najčešće u blizini uva, kao što su mišićno-skeletni pokreti vilice, vrata ili delova srednjeg uva, brzina protoka krvi, malformacije i aneurizme bliskih krvnih sudova itd.

Uzroci zujanja u uvu mogu biti mnogobrojni. Starost, skoro redovno ide sa pojavom zujanja u ušima i oslabljenim sluhom. Bolesti i oštećenja srednjeg i unutrašnjeg uva (upale, tumori, otoskleroza, Menijerova bolest), upale i tumori slušnog nerva (neurinom akustikusa), prehlada i disfunkcija eustahijeve tube, upale sinusa, tumori mozga. Bolesti kardiovaskularnog sistema – ateroskleroza krvnih sudova, visok krvni pritisak, povećane masnoće u krvi, hormonski disbalansi, bolest štitne žlezde, degeneracija vratne kičme.

Favorizujući faktori su brojni i oni mogu povećati rizik nastanka zujanja u uvu: redovno izlaganje glasnim zvukovima (motorne testere, vatreno oružje, zvučnici), slušanje glasne muzike i slušalice u ušima, preterana upotreba mobilnih telefona, dugogodišnja upotreba i visoke doze nekih lekova (aspirin, hlorokin, antibiotici-gentamicin, streptomicin, neki citostatici...) Faktori rizika su i upotreba alkohola i kofeina u velikim količinama, komorbiditeti dijabetes, gojaznost, hipertenzija), povrede glave i vrata, kao i starost, stres, nespavanje, premor.

Tinitus različito utiče na ljude. Nekim ljudima može značajno uticati na kvalitet života, jer izaziva: glavobolju, umor, nesanicu, dekoncentraciju, anksioznost, depresiju. Lečenje ovih stanja možda neće direktno uticati na zujanje u ušima, ali može olakšati prisutnu muku. Uz dobru prevenciju: korišćenje antifona, profesionalne zaštitne opreme, promene stila života, u smislu zdravog života, zdrave ishrane, vežbi, šetnje, moguće je ublažiti

Abstract

Tinnitus is a very common symptom in the ENT office. Patients describe it as ringing in the ears and it presents them with a very big mental and emotional problem, it disrupts memory and concentration, interferes with their daily life, and causes bad mood and fear. The word tinnitus is of Latin origin and translates as "ringing or rattling" and can be manifested in different forms of sound perception such as: ringing, whisling, tweeting, hissing, etc.

Tinnitus is one of the frequent symptoms in the general practice office and one of the most common in the ear specialist. With a good and thorough medical history, complete and thorough examination, hearing test (audiometry), middle ear examination (tympanometry), and with the consultation of a neurologist, internist, and physiatrist, guidelines for the treatment of tinnitus are determined. There are two types of tinnitus: subjective, which is a noise in the head and ears that only the patient hears (the most common in 99% of cases), and objective, which can be heard by another person near him. There are concrete reasons for objective noise, most often near the ear, such as musculoskeletal movements of the jaw, neck, or parts of the middle ear, speed of blood flow, malformations and aneurysms of nearby blood vessels, etc.

The causes of ringing in the ear can be numerous. Old age almost regularly goes with tinnitus and hearing loss. Diseases and damage of the middle and inner ear (inflammations, tumors, otosclerosis, Meniere's disease), inflammations and tumors of the auditory nerve (acoustic neuroma), colds and Eustachian tube dysfunction, sinus infections, and brain tumors. Diseases of the cardiovascular system - atherosclerosis of blood vessels, high blood pressure, increased fats in the blood, hormonal imbalances, thyroid disease, degeneration of the cervical spine.

Many contributing factors can increase the risk of tinnitus: regular exposure to loud noises (chainsaws, firearms, loudspeakers), listening to loud music and headphones in the ears, excessive use of mobile phones, long-term use and high doses of some drugs (aspirin, chloroquine, antibiotics-gentamicin, streptomycin, some cytostatics...) Risk factors are the use of alcohol and caffeine in large quantities, comorbidities diabetes, obesity, hypertension), head and neck injuries as well as age, stress, lack of sleep, and fatigue.

Tinnitus affects people differently. For some people, it can significantly affect their quality of life because it causes headaches, fatigue, insomnia, lack of focus, anxiety, and depression. Treating these conditions may not directly affect the tinnitus, but it may ease the discomfort. With good prevention - use of antifones, professional protective equipment, and changes in lifestyle in

zujanje. Takođe se koriste mnogi tretmani i edukacije kako se saživeti sa zujanjem u ušima, mogu se koristiti slušni aparati i kohlearni impantati – kod zujanja udruženog sa oslabljenim sluhom, generatori zvuka za prekrivanje i maskiranje tinitusa, kao i lekovi tipa vazodilatatora, B-kompleks vitamina, sedativa itd.

Zaključak je da zujanje u uvu može da nastane i bez očiglednog razloga, da u većini slučajeva nije znak ozbiljnog zdravstvenog problema. Jedan je od čestih simptoma, naročito u starijoj populaciji. Lečenje zujanja u uvu zahteva multidisciplinarni pristup u traženju uzroka i kompleksno lečenje. Za sada ne postoji nijedan lek koji je dokazao efikasnost u kliničkom ispitivanju. Subjektivi tinitus, uz sve tretmane i lekove, zahteva dobru motivaciju i ličnu volju da se zujanje u uvu stavi u drugi plan i na taj način sačuva i unapredi kvalitet života.

terms of healthy living, healthy diet, exercises, and walking, it is possible to reduce tinnitus. There are also many treatments and education on how to live with tinnitus, hearing aids and cochlear implants can be used - for tinnitus associated with impaired hearing, sound generators to cover and mask tinnitus, as well as vasodilators, B-complex vitamins, sedatives, etc.

The conclusion is that ringing in the ear can occur for no apparent reason, and in most cases, it is not a sign of a serious health problem. It is one of the frequent symptoms, especially in the elderly population. Treatment of tinnitus requires a multidisciplinary approach to finding the cause and complex treatment. So far, there is not a single drug that has proven its effectiveness in clinical trials. Subjective tinnitus, along with all treatments and drugs, requires good motivation and personal will to put the ringing in the ears on the back burner and thus preserve and improve the quality of life.

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APSTRAKT 20S 2024; 5(1): 28–28 ABSTRACT 20E

Opšte i specifične mere prevencije širenja bolesti kovid-19 u stomatološkoj praksi

General and Specific Measures to Prevent the Spread of COVID-19 in Dental Practice

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Apstrakt

Kovid-19 je respiratorna infekcija koja se primarno prenosi kapljičnim putem. Prvi put se pojavljuje u Kini, 31. decembra 2019. godine, a 11. marta 2020. godine proglašena je pandemija. Pandemija je širom sveta, unutar svih segmenata života, donela dosta promena, svakodnevnih izazova sa kojima se suočavamo, pa tako i u oblasti medicine.

Kovid-19 pandemija donela je i potrebu za stvaranje uslova primene „nesvakidašnjih" zahteva, mera i procedura zdravstvenog sistema i medicinskog zbrinjavanja, koje za sobom povlače i određenu reorganizaciju medicinskih intervencija i sistema zbrinjavanja, uključujući i mere obavezne lične zaštite, pridržavanja primerene socijalne distance i svih higijenskih procedura.

Stomatološke sestre svakodnevno su izložene faktorima rizika za sticanje infekcije, ali i za prenošenje infekcije kroz dalji kontakt sa bolesnicima, ostalim osobljem, članovima porodice i poznanicima, čime je omogućeno brže širenje infekcije na opštu populaciju. Kroz zdravstveno-vaspitni rad, medicinske sestre podižu svest stanovništva o značaju održavanja respiratorne higijene, higijene ruku, značaju nošenja zaštitnih maski, kao i održavanja fizičke distance. Nošenje zaštitnih maski u zatvorenim javnim prostorima u situacijama kada nije moguće održavati preporučenu udaljenost od najmanje dva metra (javni prevoz, tržni centri, maloprodajni objekti, teretane, na radnom mestu) značajna je opšta mera prevencije širenja bolesti kovid-19.

Mere prevencije mogu biti opšte i specifične. Specifične mere podrazumevaju vakcinaciju protiv uzročnika oboljenja. U Republici Srbiji je preporučena (dobrovoljna) imunizacija protiv kovid-19.

Zaključak: Stomatološka sestra, kao važna karika u sistemu pružanja zdravstvene zaštite, treba da shvati značaj i da unutar sistema podigne svest o prevenciji kovid-19 infekcije, čime bi se kroz zdravstveno-vaspitni rad podigla svest bolesnika o merama prevencije kovid-19 infekcije.

Abstract

COVID-19 is a respiratory infection that is primarily transmitted by droplets. It first appeared in China on December 31, 2019, and on March 11, 2020, it was declared a pandemic. The pandemic has brought a lot of changes in all segments of life around the world, the daily challenges we face, including in the field of medicine.

The COVID-19 pandemic has brought the need to create conditions for the application of "unusual" requirements, measures, and procedures of the health system and medical care, which involves a certain reorganization of medical interventions and care systems, including measures of mandatory personal protection, adherence to appropriate social distance and all hygiene procedures.

Dental nurses are daily exposed to risk factors for acquiring an infection, but also for transmitting the infection through further contact with patients, other staff, family members, and acquaintances, which enables the faster spread of the infection to the general population. Through health education, nurses raise the population's awareness of the importance of maintaining respiratory hygiene, hand hygiene, the importance of wearing protective masks, and maintaining physical distance. Wearing protective masks in closed public spaces in situations where it is not possible to maintain the recommended distance of at least two meters (public transport, shopping malls, retail establishments, gyms, in the workplace) is an important general measure to prevent the spread of the disease COVID-19.

Prevention measures can be general or specific. Specific measures include vaccination against the causative agent of the disease. In the Republic of Serbia, (voluntary) immunization against COVID-19 is recommended.

Conclusion: The dental nurse, as an important link in the health care delivery system, should understand the importance and raise awareness within the system about the prevention of COVID-19 infection, which would raise the awareness.

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APSTRAKT 21S 2024; 5(1): 29–30 ABSTRACT 21E

Pušenje kao nepoželjna navika među zdravstvenim radnicima
Smoking as an Undesirable Habit among Healthcare Workers

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Apstrakt

Pušenje je način konzumiranja duvana uzimanog u obliku cigareta. Predstavlja javno-zdravstveni problem. Pušenje predstavlja naviku, i psihičku i fizičku zavisnost. Pušenje duvana doprinosi opštem zagađivanju životne sredine. Dokazano je da je štetnost od duvanskog dima u zatvorenom prostoru mnogo veća nego sav smog u većim gradovima, zato je i uveden zakon o zabrani pušenja u zatvorenim prostorijama.

Duvanski dim sadrži više od 4000 hemijskih supstanci, većina su otrovi, mutagene supstance i nadražajna sredstva (katran, ugljen-monoksid, nikotin, amonijak, butan, metanol itd.). Većina sadrži kancerogene materije, neki radioaktivne komponente (pesticidi). Nikotin je otrov koji izaziva zavisnost, droga koja utiče na um, stimuliše, opušta i utiče na raspoloženja i osećanja.

Nikotinsku zavisnost upoređuju sa heroinskom zavisnošću. Apstinencijalni sindromi se javljaju čim nivo nikotina padne ispod nivoa na koji su ćelije navikle.

Podaci SZO alarmiraju veličinu problema: 47% stanovništva Srbije puši. 33,6% zdravstvenih radnika puši. Godišnje od posledice pušenja cigareta umre preko četiri miliona ljudi u svetu. Dugogodišnji pušači smanjuju životni vek i obolevaju od bolesti vezanih za pušenje duvana.

Pušenje izaziva:
– srčani i moždani udar,
– rak pluća, usne jezika i glasnih žica.

Toksini iz cigareta utiču na rad pankreasa i povećavaju verovatnoću pojave dijabetesa. Pušači češće boluju od akutnih i hroničnih bolesti disajnih organa. Pušenje izaziva bolest krvnih sudova, kao što su „pušačka noga" i impotencija. Nepovoljno utiče na plodnost kod muškaraca i žena.

Pored svih ovih zabrinjavajućih podataka, pušenje je vrlo masovna pojava među zdravstvenim radnicima, bez obzira na to što su baš oni nosioci zdravstveno-vaspitnog rada i što bi trebalo da budu lični primer zdravog načina života.

Cilj rada: Prikaz činjeničnog stanja pušača među zdravstvenim radnicima. Podizanje motivacije i menjanje stavova u cilju smanjenja i potpunog prestanka pušenja.

Istraživanje: Populaciju ovog istraživanja, kao reprezentativni uzorak, čini 120 zdravstvenih radnika u Nišu. Istraživanja su izvršena putem ankete.

Rezultati su pokazali sledeće:
– Puši 29,2 % zdravstvenih radnika, i još 15,5% ponekad zapali cigaretu, što ukupno čini 44,7% pušača. Ne puši 55,3% zdravstvenih radnika.

Abstract

Smoking is a way of consuming tobacco taken in the form of cigarettes. It represents a public health problem. Smoking is a habit and a psychological and physical addiction. Tobacco smoking contributes to the general pollution of the environment. It has been proven that the damage from tobacco smoke to an enclosed space is much greater than all the smog in larger cities, which is why the law prohibiting smoking in closed rooms was introduced.

Tobacco smoke contains more than 4000 chemical substances, most of which are poisons, mutagenic substances, and irritants (tar, carbon monoxide, nicotine, ammonia, butane, methanol, etc.). Most contain carcinogenic substances, and some radioactive components (pesticides). Nicotine is an addictive poison, a drug that affects the mind, stimulates, relaxes, and affects moods and feelings.

Nicotine addiction is compared to heroin addiction. Withdrawal syndromes occur as soon as the nicotine level falls below the level to which the cells are accustomed.

WHO data alarm the magnitude of the problem: 47% of the population of Serbia smokes. 33.6% of healthcare workers smoke. Every year, more than four million people in the world die as a result of smoking cigarettes. Long-term smokers reduce their life span and suffer from diseases related to tobacco smoking.

Smoking causes:
– Heart attack and stroke,
– Lung cancer, as well as lips, tongue, and vocal cord cancer.

Toxins from cigarettes affect the function of the pancreas and increase the likelihood of diabetes. Smokers are more likely to suffer from acute and chronic diseases of the respiratory organs. Smoking causes blood vessel disease, such as "smoker's leg" and impotence. Unfavorably affects fertility in men and women

In addition to all these worrying data, smoking is a very widespread phenomenon among health workers, regardless of the fact that they are the bearers of health education work and should be a personal example of a healthy lifestyle.

The aims: Presentation of the factual situation of smokers among health workers. Raising motivation and changing attitudes in order to reduce and completely stop smoking.

Research: The population of this research is a representative sample of 120 healthcare workers in Niš. The research was carried out through a survey.

The results have shown:
– 29.2% of healthcare workers are smokers, and another 15.5% sometimes light a cigarette, which makes a total of 44.7% of smokers. 55.3% of healthcare workers do not smoke.

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– Procenat pušača u odnosu na profesiju je sledeći: lekari 36%, medicinske sestre-tehničari 63,6%.
– Prikaz slučaja u odnosu na „shvatanje pušenja kao ozbiljnog zdravstvenog problema" je 95%.
– Veliki procenat pušača zdravstvenih radnika zna da je pušenje u koaliziji sa njihovom profesijom, 75%.
– Više od polovine zdravstvenih radsnika izjasnilo se da ima želju da prestane sa pušenjem cigareta 65,2%.
– Mali je broj zdravstvenih radnika, 12,5%, koji smatra da im je potrebna medicinska pomoć za prestanak pušenja.

Postoji tendencija pada navike pušenja 7%, posle uvođenja Zakona o zaštiti stanovništva od izloženosti duvanskom dimu. Međutim, iako je trend silazan, broj pušača među zdravstvenim radnicima je i dalje visok.

Zaključak: Evidentno je poražavajući broj zdravstvenih radnika pušača, bez obzira na njihova medicinska znanja, i samosvesnost o štetnosti duvanskog dima.

– The percentage of smokers in relation to the profession is as follows: doctors - 36%, nurses-technicians - 63.6%.
– Case presentation concerning "understanding smoking as a serious health problem" is 95%.
– A large percentage of health workers who smoke know that smoking is associated with their profession (-75%)
– More than half of the health workers declared that they wanted to stop smoking cigarettes (65.2%)
– There is a small number of health workers (12.5%) who believe that they need medical help to quit smoking

There is a tendency for the smoking habit to decrease by 7%, after the introduction of the Law on the Protection of the Population from Exposure to Tobacco Smoke. However, even if the trend is downward, the number of smokers among healthcare workers is still high.

Conclusion: It is apparent that the number of healthcare workers who smoke regardless of their medical knowledge and self-awareness about the harmfulness of tobacco smoke is devastating.

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APSTRAKT 22S 2024; 5(1): 31–31 ABSTRACT 22E

Sindrom izgaranja na radnom mestu
Burnout Syndrome at the Working Place

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Apstrakt

Uvod: Burnout sindrom (sindrom izgaranja) je psihološki fenomen emocionalne iscrpljenosti, depersonalizacije i umanjenja ličnog postignuća koji se javlja kod profesija koje su povezane sa pomaganjem drugim ljudima. Sindrom izgaranja na poslu stigao je kao društveni i profesionalni problem i do nas. Mnoga ispitivanja i stručni radovi ukazuju na pojavu tog sindroma, naročito u radnim sredinama u kojima se pojedinci susreću sa problemom nesigurnosti za svoje radno mesto, gde nema kontrole rada i nema odgovarajuće zaštite radnika, te tamo gde su zahtevi radnog mesta takvi da prisiljavaju radnike na duže radno vreme, promene procesa rada i hitnost intervencije, bez mogućnosti dovoljnog nedeljnog i godišnjeg odmora. Srećemo ga i u sredinama sa neadekvatnom novačanom nadoknadom, lošim međuljudskim odnosima, tamo gde su preobimni zadaci, gde se radi sa neizlečivim pacijentima, gde postoji osećaj besmislenosti posla. Analizom ove pojave, pokazalo se da su najugroženija radna mesta u zdravstvu.

Cilj rada: Ispitati prisutnost burnout sindroma kod zaposlenih sestara na odeljenju hirurgije.

Metodologija: U radu su izneseni svi dostupni podaci iz strane literature, faktori nastanka tog sindroma, postojeća definicija, simptomi koji karakterišu pojavu bolesti, specifičnosti nastanka te bolesti, i u našoj profesiji, i saveti za sprečavanje nastanka bolesti. Lično istraživanje je sprovedeno na Odeljenju hirurgije u Požarevcu, u periodu 20. 9 – 20. 10. 2022, na uzorku od 15 medicinskih sestara i tehničara.

Rezultati rada: Rezultat će biti prezentovan na kongresu.

Zaključak: Dobijeni rezultati pokazuju visok stepen prisutnosti sindroma izgaranja na radnom mestu. Potrebno je posvetiti pažnju istraživanju i prevenciji ovog sindroma.

Abstract

Introduction: Burnout syndrome is a psychological phenomenon of emotional exhaustion, depersonalization, and reduction of personal achievement that occurs in professions related to helping other people. Burnout syndrome at work has reached us as a social and professional problem. Many studies and professional papers indicate the occurrence of this syndrome, especially in working environments where individuals face the problem of insecurity in their workplace, where there is no working control and no adequate protection of workers, and where the demands of the workplace are such that they force workers to longer working hours, changes in work processes and the urgency of intervention without the possibility of sufficient weekly and annual vacation. We also meet it in environments with inadequate payment, bad interpersonal relations, where there are too many tasks, where we work with incurable patients, and where there is a sense of the pointlessness of work. The analysis of this phenomenon revealed the most vulnerable jobs in healthcare.

The aim: To examine the presence of burnout syndrome among working nurses in the surgery department

Methodology: The paper presents all available data from foreign literature, the factors causing the syndrome, the existing definition, the symptoms that characterize the beginning of the disease, the specifics of the beginning of the disease, and in our profession, and advice for preventing the onset of the disease. Personal research was conducted at the Department of Surgery in Požarevac in the period September 20-October 20, 2022. on a sample of 15 nurses and technicians.

Results: The results will be presented at the congress.

Conclusion: The obtained results show a high degree of presence of burnout syndrome in the workplace. It is necessary to pay attention to the research and prevention of this syndrome

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APSTRAKT 23S 2024; 5(1): 32–32 ABSTRACT 23E

Umeća medicinske sestre u edukaciji pacijenata i porodice
The Skills of a Nurse in Patient and Family Education

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Apstrakt

Uticaj na edukaciju pacijenata i porodice u hospitalnim uslovima najviše može izvršiti medicinska sestra/tehničar. Hronične bolesti imaju trend porasta, ali i smanjen broj raspoloživih resursa za duge hospitalizacije. Naši pacijenti i njihove porodice na kućno lečenje izlaze u sredinu koja im vrlo često ne može pružiti odgovore i podršku za male dileme, kao i za intervencije koje moraju sami obavljati.

Prepoznavanjem potrebe za edukacijom i individualnim razmatranjem za svakog pacijenta u hospitalnim uslovima, pred medicinske sestre stavljaju se nimalo jednostavni zadaci, u smislu obučenosti i pacijenta i porodice da prihvate novonastalu situaciju.

Edukacija pacijenata značajna je za sestrinsku praksu, jer doprinosi zdravlju, boljim zdravstvenim ishodima, osnažuje pacijenta za suočavanje sa zdravstvenim problemima, te doprinosi kvalitetetu života.

Ovaj rad ima za cilj da prikaže moguće probleme u edukaciji pacijenata i porodice, najčešće edukativne sadržaje u hospitalnim uslovima, ali i da prikaže kako pomoći pacijentu i porodici da prihvati stanje koje mu ugrožava život. Takođe ima za cilj da prikaže bitne karakteristike važne za sestru edukatora.

Ključne reči: edukacija, pacijent, porodica

Abstract

Nurses can have the most influence on the education of patients and families in hospital conditions. Chronic diseases have an increasing trend, but the number of available resources for long hospitalizations has also decreased. Our patients and their families go to home treatment in an environment that very often cannot provide them with answers and support for small dilemmas as well as for interventions that they have to perform themselves.

Recognizing the need for education and individual consideration for each patient in hospital conditions, nurses get the tasks, not simple at all, in terms of training both the patient and the family to accept the new situation.

Patient education is important for nursing practice because it contributes to health, and better health outcomes, empowers the patient to deal with health problems, and contributes to the quality of life.

The goal of this paper is to show possible problems in the education of patients and families, the most common educational content in hospital conditions, but also to show how to help the patient and the family to accept the condition that threatens the patient`s life. It also aims to demonstrate essential characteristics important to the nurse educator.

Key words: education, patient, family

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APSTRAKT 24S 2024; 5(1): 33–33 ABSTRACT 24E

Stereotaksična radioterapija, mogućnosti kod karcinoma pluća

Stereotaxic Radiotherapy, Possibilities in Lung Carcinoma

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Apstrakt

Stereotaksična radioterapija pripada grupi takozvane slikom vođene radioterapije i njen cilj je precizno određivanje mete i precizna isporuka same doze zračenja. Na taj način, veoma mali volumen zdravog okolnog tkiva biva uključen u zračno polje, što vodi u mogućnost povećanja radioterapijske doze na sam tumor, kao i smanjenja toksičnosti tretmana.

Nesitnoćelijski karcinom pluća je vodeći uzrok smrtnosti od raka i kod muškaraca i kod žena širom sveta. Za pacijente u najranijem, prvom stadijumu bolesti, standardni način lečenja je hirurgija, torakoskopska hirurgija ili klasična lobektomija. Skoro četvrtina bolesnika u ranom stadijumu bolesti neće moći biti operisana zbog loše disajne funkcije ili komorbiditeta.

Do sada 3D konformalna radioterapija (3D CRT) ili radiofrekventna ablacija bile su alternativne metode za lečenje inoperabilnog karcinoma pluća u prvom stadijumu. Danas SBRT pruža mogućnost lečenja ovih bolesnika veoma visokim dozama zračenja, uz minimalnu toksičnost. Pored pacijenata kojima se dijagnostikuje tumor u ranom stadijumu bolesti (primarni periferno lokalizovani tumor pluća, veličine do 5 cm, bez metastaza u limfnim čvorovima) SBRT se može primeniti u lečenju centralno lokalizovanih tumora pluća, sekundarnih depozita u plućima i tumora u plućima koji nisu patohistološki potvrđeni.

Definitivnu odluku o najboljoj terapijskoj opciji za svakog pacijenta, pa i za SBRT tumora pluća, donosi tim onkološkog konzilijuma. Pre odluke o definitivnom tretmanu, potrebna je kompletna dijagnostička evaluacija – CT grudnog koša i gornjeg abdomena, testovi plućne funkcije, bronhoskopija i ph nalaz. Da bi se sprovela SBRT pluća, neophodno je uraditi niz procedura – pozicioniranje i imobilizacija pacijenta, delineaciju ciljnog volumena, analizu plana, verifikaciju radioterapijskog tima i sprovođenje zračnog tretmana na linearnom akcelatoru.

U cilju određivanja volumena mete zračenja, potrebno je uraditi CT simulaciju zbog pokretljivosti tumora, usled normalnog disanja. Na svakom urađenom skenerskom preseku, radijacioni onkolog vrši obeležavanje organa od rizika, tj. zdravog tkiva koje se nalazi neposredno u blizini tumora. Delineacija ciljnog volumena podrazumeva iscrtavanje tumorske promene u svim fazama disanja. Medicinski fizičar zatim vrši planiranje zračnih polja tako što se što veća doza aplikuje na tumor, uz maksimalnu poštedu okolnog zdravog tkiva i organa. Doza i broj seansi se određuju individualno za svakog pacijenta i mogu se koristiti od 20 gu u jednoj seansi do 50 gu u 5 seansi. Zračenje se može sprovoditi svaki dan ili svaki drugi dan.

Abstract

Stereotaxic radiotherapy belongs to the group of so-called image-guided radiotherapy and it aims to precisely determine the target and precisely deliver the radiation dose itself. In this way, a very small volume of healthy surrounding tissue is included in the airfield, which leads to the possibility of increasing the radiotherapy dose to the tumor itself, as well as reducing the toxicity of the treatment.

Non-small cell lung cancer is the leading cause of cancer death in men and women worldwide. For patients in the earliest first stage of the disease, the standard way of treatment is surgery, thoracoscopic surgery, or classic lobectomy. Almost a quarter of patients in the early stage of the disease will not be able to be operated on due to poor respiratory function or comorbidities.

Until now, 3D conformal radiotherapy (3D CRT) or radiofrequency ablation have been alternative methods for the treatment of inoperable lung cancer in the first stage. Today, SBRT offers the possibility of treating these patients with very high doses of radiation with minimal toxicity. In addition to patients who are diagnosed with a tumor in the early stage of the disease (primary peripherally localized lung tumor up to 5 cm in size, without metastases in the lymph nodes), SBRT can be used in the treatment of centrally localized lung tumors, secondary deposits in the lungs and lung tumors that are not pathohistologically confirmed.

The definitive decision on the best therapeutic option for each patient, including lung tumor SBRT, is made by the oncology council team. Before deciding on a definitive treatment, a complete diagnostic evaluation is required - CT of the chest and upper abdomen, pulmonary function tests, bronchoscopy, and pH test. In order to perform SBRT of the lungs, it is necessary to perform a series of procedures - positioning, and immobilization of the patient, delineation of the target volume, analysis of the plan, verification of the radiotherapy team, and the implementation of radiation treatment on the linear accelerator.

To determine the volume of the radiation target, it is necessary to perform a CT simulation due to the mobility of the tumor due to normal breathing. On each scanned section, the radiation oncologist marks the organs at risk, i.e. the healthy tissue located near the tumor. The delineation of the target volume implies the delineation of the tumor change in all phases of breathing. The medical physicist then plans the radiation fields by applying a higher dose to the tumor while sparing the surrounding healthy tissue and organs as much as possible. The dose and number of sessions are determined individually for each patient and can be used from 20Gy in one session to 50Gyin 5 sessions. Radiation can be administered every day or every other day.

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APSTRAKT 25S 2024; 5(1): 34–35 ABSTRACT 25E

Uticaj demografskih i socioekonomskih faktora na nastanak sindroma sagorevanja u privatnom sektoru bezbednosti u centralnoj Srbiji

The Influence of Demographic and Socioeconomic Factors on the Emergence of Burnout Syndrome in the Private Security Sector in Central Serbia

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Apstrakt

Uvod: Sagorevanje na poslu predstavlja specifično područje istraživanja kojem se u savremenim uslovima pridaje sve veća pažnja. Cilj studije je bio da se ispita uticaj demografskih i socioekonomskih faktora na nastanak sindroma sagorevanja u privatnom sektoru bezbednosti u centralnoj Srbiji.

Materijali i metode: Primenjena je multicentrična studija preseka kojom je obuhvaćen reprezentativni uzorak zaposlenih koji su ispunjavali kriterijume za uključivanje u istraživanje. Podaci su prikupljani upotrebom specijalno dizajniranog polustrukturalnog epidemiološkog upitnika sa 20 pitanja i Maslač upitnika za procenu sindroma sagorevanja na poslu za zaposlene u ustanovama koji su u neposrednom kontaktu sa ljudima.

Rezultati: Stopa odgovora je bila 80% (353/439). Muškarci predstavljaju 93,5% svih ispitanika i bili su značajno stariji od žena: 44,09 ± 11,44 naspram 36,91 ± 7,92 (F = 8,752; p = 0,003), 224 (64,3%) ispitanika je bilo u braku, oko trećine nije imalo dece 119 (33,7%). Analizom stepena obrazovanja ustanovljeno je da je najveći broj zaposlenih završio četvorogodišnju srednju školu 193 (54.7%), trogodišnju srednju školu 103 (29.2%), dok je fakultetsko obrazovanje imalo 27 (7.6%). Službenika obezbeđenja je bilo 300 (78,00%), oko 22,7% je bilo na rukovodećim mestima, 288 (81,6%) radilo je u smenama, a najviše ispitanika, čak 277 (78,5%), radilo je od 8 do 12 sati dnevno. Utvrđen je značajan stepen sindroma sagorevanja kod naših ispitanika: emocionalna iscrpljenost (visoki 66.3%, umeren 19.8%); depersonalizacija (visoki 82.4% umeren 16.2%); lična ostvarenost (nizak 34.5%, umeren 32.9%). Skoro dva puta više emocionalno iscrpljenih ispitanika u našoj studiji, u velikoj meri povezano je sa socio-demografskim, a posebno ekonomskim karakteristikama: mlađe životno doba, ženski pol, kraći radni staž, rad u smenama, rad duži od 12 sati dnevno kao i rad 8 – 12 sati dnevno i nezadovoljstvo uslovima na radnom mestu. Zaposleni koji radi u smenama ima 75% povišenu verovatnoću da ispolji ukupno sagorevanje na poslu, u odnosu na zaposlene koji ne rade u smenama. Zaposleni koji rade 8 – 12 sati imaju 150% veću verovatnoću da ispolje ukupno sagorevanje na poslu. Zaposleni koji rade preko 12 sati imaju 203% veću verovatnoću da ispolje ukupno sagorevanje na poslu. Zaposleni koji nije zadovoljan uslovima rada ima 280% povišenu verovatnoću da ispolji ukupno sagorevanje na poslu, u odnosu na zaposlene koji su zadovoljni uslovima rada.

Abstract

Introduction: Burnout at work represents a specific area of research that is receiving increasing attention in modern conditions. The study aimed to examine the influence of demographic and socioeconomic factors on the occurrence of burnout syndrome in the private security sector in central Serbia.

Materials and Methods: A cross-sectional multicenter study was applied, which included a representative sample of employees who met the criteria for inclusion in the research. Data were collected using a specially designed semi-structured epidemiological questionnaire with 20 questions and the Maslach questionnaire for the evaluation of burnout syndrome at work for employees in institutions that are in direct contact with people.

Results: The response rate was 80% (353/439). Men represent 93.5% of all respondents and were significantly older than women: 44.09±11.44 vs. 36.91±7.92 (F=8.752; p=0.003), 224 (64.3%) of the respondents were married, about a third had no children 119 (33.7%). By analyzing the level of education, it was established that the largest number of employees completed four-year high school 193 (54.7%), three-year high school 103 (29.2%), and 27 (7.6%) had a university education. There were 300 security officers (78.00%), about 22.7% were in management positions, 288 (81.6%) worked in shifts, and most respondents, even 277 (78.5%), worked from 8 to 12 hours a day. A significant degree of burnout syndrome was found in our respondents: emotional exhaustion (high 66.3%, moderate 19.8%); depersonalization (high 82.4% moderate 16.2%); personal fulfillment (low 34.5%, moderate 32.9%). Almost twice as many emotionally exhausted respondents in our study are largely related to socio-demographic and especially economic characteristics: younger age, female gender, shorter work experience, working in shifts, working longer than 12 hours a day as well as working 8-12 hours a day and dissatisfaction with the conditions at the workplace.A shift worker is 75% more likely to experience total job burnout than a non-shift worker. Employees who work 8-12 hours a day are 150% more likely to experience overall burnout at work. Employees who work more than 12 hours are 203% more likely to experience overall job burnout. An employee who is not satisfied with working conditions has a 280% higher probability of experiencing total burnout at work compared to employees who are satisfied with working conditions.

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Zaključak: Na osnovu prikazanih rezultata, oko jedne trećine zaposlenih ima simptome ukupnog sagorevanja na poslu. Ženski pol, kraći radni staž, smenski rad, rad preko 12 sati, zadovoljstvo uslovima rada, značajno su povezani sa ukupnim sagorevanjem na poslu. Ubrzani razvoj profesionalnog privatnog sektora bezbednosti u Srbiji zahteva dodatno istraživanje sindroma sagorevanja, kako bi se prevenirali faktori povezani sa njegovim nastankom.

Ključne reči: sagorevanje, privatno obezbeđenje, Maslač upitnik

Conclusion: Based on the presented results, about one-third of employees have symptoms of total burnout at work. Female gender, shorter work experience, shift work, working more than 12 hours, and satisfaction with working conditions, are significantly related to overall burnout at work. The accelerated development of the professional private security sector in Serbia requires additional research into burnout syndrome to prevent the factors associated with its occurrence.

Key words: burnout, private security, Maslach questionnaire

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APSTRAKT 26S 2024; 5(1): 36–37 ABSTRACT 26E

Fizički napori i zaštita zdravlja medicinskih sestara u JINT

Physical Exercises and Health Protection of Nurses in Intensive Care Unit

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Apstrakt

Zaštitni položaji su položaji koje primenjujemo u svakodnevnom životu kako bismo sačuvali i smanjili pritisak na bolna mesta i bolove u kičmi. Najveće opterećenje trpi krsno-lumbalni deo kičme, mesto gde se trup vezuje za karlicu i donje ekstremitete. Telo čuvamo i štitimo kroz zaštitne položaje i pokrete.

Profesionalna bolest je bolest koja je nastala kao direktna i jedina posledica izloženosti štetnim faktorima na radnom mestu. Procenjuje se da godišnje oko 25% populacije u svetu oboli od neke bolesti koštano-zglobnog sistema. Najčešća bolest vezana za rad na lokomotornom sistemu je sindrom bolnih leđa i bolnog vrata. Od sindroma bolnih leđa povremeno boluje 20 – 40%, a trajno, približno 18% svih radnika, mlađih od 45 godina.

Većina zdravstvenih radnika je pod rizikom za razvoj mišićno-koštanih poremećaja. Medicinske sestre su izložene kontinuiranim fizičkim naporima. Kako bi se sprečio nastanak poremećaja, potrebno je prikupljati podatke o rizicima na radnom mestu, kao i upoznati zdravstvene radnike o mogućim opasnostima. Zbog bolova u leđima, sve je više izgubljenih radnih dana, što utiče i na samu zdravstvenu negu. Nespecifičan bol u donjem delu leđa je neugodno medicinsko stanje koje može onemogućiti rad i čest je razlog izostanka sa posla. Većina sestara pati od određenog poremećaja koji je nastao zbog podizanja teških pacijenata, guranja teške opreme, premeštanja pacijenata ili pak pridržavanja teških instrumenata u operacionim salama.

Medicinske sestre, bolničari i ostalo osoblje su među 10 zanimanja s najvećim rizikom od istegnuća mišića i zglobova. Američko Udruženje medicinskih sestara procenjuje da 12% medicinskih sestara napušta posao zbog povreda leđa, dok se 52% žali na hroničnu bol u leđima. Smatra se da je više od trećine povreda leđa među medicinskim sestrama povezano sa premeštanjem i rukovanjem pacijentima. Od povreda leđa, zbog premeštanja pacijenata i rukovanja njima, pati 38% svih medicinskih sestara. Medicinske sestre koriste 30% više bolovanja nego ostali zdravstveni radnici. Transfer pacijenata krevet-stolica i obrnuto, kao i promena položaja u postelji, poslovi su za koje je utvrđeno da su visokorizični za nastanak mišićno koštanih poremećaja. Da bi se sprečila pojava profesionalnih oboljenja, neophodna je ergonomija svih zaposlenih u zdravstvenim ustanovama. Ergonomija je disciplina koja, sa pozicije različitih nauka, nastoji da prilagodi rad i radnu sredinu psihičkim i somatskim karakteristikama. Ergonomija je način da se radi pametnije, sa manjim naporom.

Dugo radno vreme, preveliko radno opterećenje, neadekvatan broj osoblja, neadekvatna edukacija pomoćnog osoblja, neadekvatno vreme za odmor, rad u neadekvatnom položaju te-

Abstract

Protective postures are postures that we apply in our everyday life, in order to save and reduce pressure on painful places and pain in the spine. The largest load is endured by the lumbosacral part of the spine, the place where the trunk is attached to the pelvis and lower extremities. We preserve and protect the body through protective positions and movements.

An occupational disease is a disease that arose as a direct and sole consequence of exposure to harmful factors at the workplace. It is estimated that annually around 25% of the world's population falls ill with some disease of the bone and joint system. The most common disease related to work on the locomotor system is back pain and neck pain syndrome. 20-40% suffer from back pain syndrome occasionally, and approximately 18% of all workers under the age of 45 suffer permanently.

Most healthcare workers are at risk of developing musculoskeletal disorders. Nurses are exposed to continuous physical efforts. To prevent the occurrence of disorders, it is necessary to collect data on risks in the workplace, as well as inform health workers about possible dangers. Because of back pain, there are more and more lost working days, which also affects health care itself. Non-specific low back pain is an unpleasant medical condition that can make work impossible and is a common reason for being absent from work. Most nurses suffer from a certain disorder that arises from lifting heavy patients, pushing heavy equipment, moving patients, or holding heavy instruments in operating rooms.

Nurses and other staff are among the 10 occupations with the highest risk of muscle and joint sprains. American Nurses Association estimates that 12% of nurses leave their jobs due to back injuries, while 52% complain of chronic back pain. More than a third of back injuries among nurses are thought to be related to moving and handling patients. Moving and handling patients 38% of all nurses are affected by back injuries. Nurses use 30% more sick leave than other healthcare workers. Transferring patients from bed to chair and vice versa, as well as changing the position in bed, are jobs that are high risk for the occurrence of musculoskeletal disorders. In order to prevent the occurrence of occupational diseases, the ergonomics of all employees in healthcare institutions is necessary. Ergonomics is a discipline that, from the position of different sciences, tries to adjust work and the working environment to psychological and somatic characteristics. Ergonomics is a way to work smarter, with less effort.

Long working hours, excessive workload, inadequate number of staff, inadequate training of support staff and equipment, inadequate time for rest, working in an inadequate body posi-

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XIX Congress of the National Association of Health Workers of Serbia (NAHWS) with International Participation, Vrnjačka Banja, 22nd–26th May 2024

la, poremećaji ciklusa spavanja i prehrambenih navika usled smenskog rada, različiti profesionalni zadaci poput pomaganja u aktivnostima svakodnevnog života pacijenata: pozicioniranje u postelji, transport i podizanje pacijenata, podizanje i nošenje medicinskih uređaja različite težine i veličine, postelje različitih visina, takođe povećavaju rizik od traume donjih ekstremiteta.

Prosečno opterećena sestra na bolničkom odeljenju podigne približno 1,8 tona tereta u toku jedne smene. Pri podizanju pacijenta neophodne su mere prevencije zdravstvenih radnika, kao što su: eliminacija ručnog podizanja pacijenata, upotreba nosila, kolica, i kreveta podesive visine, zatim čaršavi, vazdušni dušeci za bočno pomeranje, formiranje adekvatno edukovanih timova za podizanje i prenošenje pacijenata, korišćenje kolica ili stolova sa točkićima za premeštanje teških predmeta.

tion, disorders of the sleep cycle, and eating habits due to shift work. Various occupational tasks such as assisting patients in activities of daily living, positioning in bed, transporting and lifting patients, lifting and carrying medical devices of different weights and sizes, and beds of different heights also increase the risk of lower extremity trauma.

The average overburdened nurse in a hospital ward lifts approximately 1.8 tons of load during one shift. When lifting a patient, preventive measures of healthcare workers are necessary, such as the elimination of manual lifting of patients, the use of stretchers, carts, and beds of adjustable height, then sheets, air mattresses for lateral movement, the formation of adequately educated teams for lifting and transferring patients, the use of carts or tables with wheels for moving heavy objects.

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Medicinska reč **Medical Word**

APSTRAKT 27S 2024; 5(1): 38–39 ABSTRACT 27E

Kapi za nos kao galenski lekovi u svakodnevnoj apotekarskoj praksi

Nose Drops as Galenic Medicines in Daily Pharmacy Practice

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Apstrakt

Nazalna kongestija je čest simptom velikog broja virusnih infekcija gornjih disajnih puteva. Nazalni dekongestivi se najčešće primenjuju u obliku kapi i sprejeva za nos. Kapi za nos, kao farmaceutski oblik, imaju široku primenu u svakodnevnoj apotekarskoj praksi, jer su veoma efikasni i dostupni pacijentima bez recepta. Simpatomimetici kao aktivni principi u kapima i sprejevima za nos, svojim alfa adrenergičnim efektima izazivaju vazoknistrikciju, redistribuciju lokalnog protoka krvi, smanjuju edem nazalne sluzokože i time poboljšavaju nazalnu ventilaciju, drenažu i smanjuju zapušenosti nosa. Slabo se resorbuju sa nazalne sluzokože i nemaju izražene sistemske efekte, ali su značajni lokalni neželjni efekti koji se javljaju tokom produžene upotrebe: medikamentozni rinitis (kada nakon vazokonstrikcije nastaje vazodilatacija sa još težom kongestijom), hipereaktivnost i rezistencija na terapiju. Zbog toga upotrebu treba ograničiti na 3 do 5, najduže 7 uzastopnih dana, ako je moguće samo kada je neophodno. Pacijente treba savetovati da upotrebu ograniče na što manju dozu i što ređu primenu u toku dana. Od svih nazalnih dekongestiva sa simpatomimetičkim dejstvom, efedrin poseduje najmanji potencijal da dovede do kongestije i on je lek izbora naročito u pedijatrijskoj populaciji.

Galenski lekovi – kapi za nos pripadaju farmakopejskoj grupi preparati za nos (nasalia), izrađuju se u registrovanoj galenskoj laboratoriji, u skladu sa svim važećim zakonskim propisima i smernicama koje se odnose na izradu ove vrste lekova. Polazne sirovine su kvalitet za farmaceutsku primenu, izrada se vrši u prostoru registrovanom za izradu galenskih lekova, prema oficijalnim formulacijama, korišćenjem validirane opreme i postupaka koji obezbeđuju kvalitet preparata. U izradu su uključeni farmaceutski tehničari, uz nadzor specijaliste farmaceutske tehnologije. Izradu prate radni nalozi koji definišu svaku etapu procesa izrade preparate – od merenja aktivnih i pomoćnih supstanci, preko izrade detaljnog postupka i opreme na kojoj se izvode procesi, pa do završne faze signiranja, pakovanja i skladištenja gotovog proizvoda, uz evidentiranje odgovornih lica za svaku od faza.

U toku izrade vrši se međufazna procesna kontrola, a pre puštanja serije leka u promet, kontrola završnog proizvoda. Svaka izrađena serija ispituje se u skladu sa farmakopejskim zahtevima.

U cilju utvrđivanja roka upotrebe izrađenih galenskih lekova, ispitivana je dugotrajna studija stabilnosti u uslovima koji su definisani za internacionalnu klimatsku zonu II, prema smernicama ICH Q1A i ICH Q1E koje je izdala EMA (evropska agencija za lekove) i vodiča za stabilnost WHO (Svetske

Abstract

Nasal congestion is a common symptom of many viral infections of the upper respiratory tract. Nasal decongestants are most often applied in the form of drops and nasal sprays. Nasal drops as a pharmaceutical form are widely used in everyday pharmacy practice because they are very effective and available to patients without a prescription. Sympathomimetics, as active principles in drops and sprays for the nose, with their alpha-adrenergic effects cause vasoconstriction, redistribution of local blood flow, reduce edema of the nasal mucous membrane and thus improve nasal ventilation, and drainage, and reduce nasal congestion. They are poorly resorbed from the nasal mucosa and have no pronounced systemic effects, but local side effects that occur during prolonged use are significant: medicinal rhinitis (when after vasoconstriction, vasodilation occurs with even more severe congestion), hyperactivity, and resistance to therapy. Therefore, use should be limited to 3 to 5, no longer than 7 consecutive days, if possible, only when necessary. Patients should be advised to limit the use to the smallest possible dose and to use it as infrequently as possible during the day. Of all nasal decongestants with sympathomimetic effects, ephedrine has the least potential to cause congestion and is the drug of choice, especially in the pediatric population.

Galenic medicines-nose drops belong to the pharmacopeial group Nasal preparations (Nasalia) are made in a registered Galenic laboratory, following all valid legal regulations and guidelines related to the production of this type of medicine. The starting raw materials are quality for pharmaceutical use, the production is carried out in an area registered for the production of galenic drugs, according to official formulations, using validated equipment and procedures that ensure the quality of the preparation. Pharmaceutical technicians are involved in the production under the supervision of a specialist in pharmaceutical technology. Production is followed by work orders that define each stage of the preparation process - from the measurement of active and auxiliary substances, through the production-detailed procedure and the equipment on which the processes are carried out, to the final stage of signing, packaging, and storage of the finished product, with the recording of the responsible persons for each of the stages.

Interphase process control is performed during production, and final product control is performed before releasing a batch of medicine into circulation. Each manufactured batch is tested by pharmacopeialstandards.

To determine the shelf life of the manufactured galenic drugs, a long-term stability study was conducted under the conditions defined for the international climate zone II, according to the ICH Q1A and ICH Q1E guidelines issued by the EMA (Euro-

zdravstvene organizacije). Uzorci se čuvaju na temperaturi od 25°C ± 2°C i vlažnosti 60% RH ± 5% koji su definisani za internacionalnu klimatsku zonu II.

Rezultati su prikazani grafički. Jednačine prave zavisnosti sadržaja od vremena su za: efedrin-hidrohlorid, kapi za nos 0,25% y = 0,0003x + 0,247; efedrin-hidrohlorid, kapi za nos 0,5% y = 0,0003x + 0,4919; efedrin-hidrohlorid, kapi za nos 1% y = 0,0001x + 0,9901; efedrin-hidrohlorid, kapi za nos 2% y = -0,00009x + 1,9541; nafazolin-hidrohlorid, kapi za nos 0,05% y = 0,0005x + 0,04972; nafazolin-hidrohlorid, kapi za nos 0,1% y = 0,0002x + 0,0978; ksilometazolin-hidrohlorid, kapi za nos 0,1% y = 0,0002x + 0,1054 i ukazuju da su galenski lekovi stabilni i da su u dozvoljenim specifikacijskim granicama.

Na osnovu dobijenih rezultata naznačeni galenski lekovi su stabilni, odgovarajućeg kvaliteta i efikasni u terapiji.

pean Medicines Agency) and the WHO (World Health Organization) stability guide). The samples are stored at a temperature of 25°C ±2°C and a humidity of 60%RH ±5% which are defined for the international climate zone II.

The results are presented graphically. The equations for the true dependence of content on time are for Ephedrine-hydrochloride, nasal drops 0.25% y=0.0003x+0.247; Ephedrine hydrochloride, nasal drops 0.5% y=0.0003x+0.4919; Ephedrine hydrochloride, nasal drops 1% y=0.0001x+0.9901; Ephedrine hydrochloride, nasal drops 2% y=-0.00009x+1.9541; Naphazoline hydrochloride, nasal drops 0.05% y=0.0005x +0.04972; Naphazoline hydrochloride, nasal drops 0.1% y=0.0002x+0.0978; Xylometazoline-hydrochloride, nasal drops 0.1% y=0.0002x+0.1054 and indicate that the galenic drugs are stable and within the allowed specification limits.

Based on the obtained results, the indicated galenic drugs are stable, of appropriate quality, and effective in therapy.

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Prehlada i grip – kako ih razlikovati i lečiti
Cold and Flu – How to Distinguish and Treat them

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Apstrakt

Prehlada je infekcija gornjih disajnih puteva, koju izazivaju različite vrste virusa – rinovirusi, korona virusi i virusi influence. Javlja se postepeno i manifestuje se kroz infekcije sluznice nosa, sinusa, grla i bronhija. Lako se dobija i prenosi se kapljičnim putem ili direktnim kontaktom sa zaraženom osobom i dodirom preko infektivnih predmeta. Traje nedelju dana u zavisnosti od imunog sistema. Simptomi su: curenje iz nosa, bol u grlu, kijanje, kašalj, suzne oči, glavobolja, umor.

Grip je akutno respiratorno oboljenje, izazvano virusima influence. Javlja se naglo i traje nekoliko nedelja. Simptomi su slični prehladi i ozbiljniji. Simptomi se javljaju jedan do četiri dana nakon ulaska virusa u organizam – visoka temperatura, grlobolja, kašalj, bolovi u mišićima i zglobovima, umor i slabost, zapušen nos, kijanje, glavobolja. Prehlada ne dovodi do većih zdravstvenih problema sa respiratornim organima. Grip može da izazove upalu sinusa, bronhitis i upalu pluća.

Ne postoji lek koji bi trenutno otklonio simptome prehlade i gripa, ali na tržištu postoji veliki broj preparata koji pomažu da se ublaže ti simptomi. To su višekomponentni, kombinovani preparati, namenjeni lečenju više simptoma odjednom – degongestivi, antitusici, antihistaminici, analgetici i antipiretici, peroralni antiseptici, topikalni preparati.

Grip i prehlada se ne leče antibioticima, jer ih izazivaju virusi. Cilj lečenja je da se ublaži i spreči razvoj težih simptoma. Tokom lečenja potrebno je odmarati, unositi mnogo tečnosti, jačati imunitet i sprečiti dalje širenje infekcije. Tablete i lekovi u vidu praškova za pripremu toplih napitaka su vrlo efikasni i popularni kod pacijenata. Međutim, postoje grupe pacijenata kod kojih nisu bezbedni. Paracetamol je bezbedan za većinu pacijenata i dece. Ibuprofen i acetilsalicilna kiselina nisu bezbedni kod osoba sa čirom, obolelih od astme, koji koriste lekove za razređivanje krvi. Acetilsalicilna kiselina se ne daje deci mlađoj od 16 godina.

Preparate koji sadrže sastojke za otpušavanje nosa – dekongestive – ne treba da koriste osobe sa visokim krvnim pritiskom, kardiovaskularnim oboljenjem, pojačanim radom štitne žlezde ili uvećanom prostatom, dijabetesom, osobe koje se leče antidepresivima.

Kapi efedrin, ksilometazolin i nafazolin ne treba koristiti istovremeno sa lekovima za otčepljenje nosa, jer je kontraindikovano. Neželjena dejstva su; nervoza, razdražljivost, nemir, glavobolja, insomnija, mučnina, tahikardija, akutni glaukom. Pseudoefedrin i fenilefrin mogu smanjiti efikasnost beta-blokatora i povećati rizik od hipertenzije. Digoksin i kardiotonični glikozidi sa dekongestivima povećavaju rizik od promene ritma rada srca ili srčanih napada.

Abstract

A cold is an infection of the upper respiratory tract caused by different types of viruses - rhinoviruses, coronaviruses, and influenza viruses. It occurs gradually and manifests itself through infections of the mucous membrane of the nose, sinuses, throat, and bronchi. It is easily acquired and transmitted through droplets or direct contact with an infected person and touching infectious objects. It lasts a week depending on the immune system. Symptoms are runny nose, sore throat, sneezing, cough, watery eyes, headache, and fatigue.

Influenza is an acute respiratory illness caused by influenza viruses. It appears suddenly and lasts for several weeks. The symptoms are similar to a cold and more serious. Symptoms appear one to four days after the virus enters the body - high temperature, sore throat, cough, muscle and joint pain, fatigue and weakness, stuffy nose, sneezing, headache. A cold does not lead to major health problems with the respiratory organs. The flu can cause sinus infections, bronchitis, and pneumonia.

No medicine will immediately eliminate the symptoms of colds and flu, but many preparations on the market help alleviate these symptoms. These are multi-component, combined preparations, intended for the treatment of several symptoms at once - decongestants, antitussives, antihistamines, analgesics and antipyretics, oral antiseptics, and topical preparations.

Flu and colds are not treated with antibiotics, because they are caused by viruses. The goal of treatment is to soothe and prevent the development of more severe symptoms. During treatment, it is necessary to rest, drink plenty of fluids, strengthen immunity, and prevent further spread of the infection. Tablets and medicines in the form of powders for preparing hot drinks are very effective and common among patients. However, there are groups of patients in whom they are not safe. Paracetamol is safe for most patients and children. Ibuprofen and acetylsalicylic acid are not safe for people with ulcers, or asthma, who are taking blood thinners. Acetylsalicylic acid is not given to children under the age of 16.

Preparations that contain substances used for nasal treatment - decongestants should not be used by people with high blood pressure, cardiovascular disease, increased work of the thyroid gland or enlarged prostate, diabetes, or people being treated with antidepressants.

Ephedrine, xylometazoline, and naphazoline drops should not be used simultaneously with nasal decongestants because it is contraindicated. Side effects are; nervousness, irritability, restlessness, headache, insomnia, nausea, tachycardia, and acute glaucoma. Pseudoephedrine and phenylephrine may reduce the effectiveness of beta-blockers and increase the risk of hypertension. Digoxin and cardiotonic glycosides with

Lekove protiv kijavice i curenja iz nosa – antihistaminike – ne treba da koriste pacijenti koji boluju od glaukoma, osobe koje otežano mokre, koje boluju od aritmije. Preparate sa antihistaminicima treba koristiti sa oprezom kod pacijenata sa epilepsijom, bronhitisom i astmom. Hlorfenamin povećava sedativni efekat alkohola, barbiturata, hipnotika, opioidnih analgetika, antipsihotika i anksiolitika. Ovi preparati se koriste 3–5 dana. Uzimaju se 3 puta dnevno. Ne daju se deci mlađoj od 12 godina, trudnicama, dojiljama i osobama sa oštećenom funkcijom bubrega i jetre.

Lečenje može biti bezbedno i efikasno ukoliko pacijent navede simptome, lekove koje koristi i od kojih hroničnih bolesti boluje. Upotreba kombinovanih preškova za prehladu i grip može imati neželjena dejstva. Pravilnom upotrebom mogu biti idealno rešenje u borbi protiv simptoma prehlade i gripa.

decongestants increase the risk of heart rhythm changes or heart attacks.

Medicines against sneezing and runny nose - antihistamines - should not be used by patients who suffer from glaucoma, people who have difficulty urinating, or who suffer from arrhythmia. Preparations with antihistamines should be used with caution in patients with epilepsy, bronchitis, and asthma. Chlorphenamine increases the sedative effect of alcohol, barbiturates, hypnotics, opioid analgesics, antipsychotics, and anxiolytics. These preparations are used for 3-5 days. They are taken 3 times a day. They are not given to children under the age of 12, pregnant women, nursing mothers, and people with impaired kidney and liver function.

The treatment can be safe and effective if the patient states the symptoms, the drugs he uses, and the chronic diseases he suffers from. The use of combined cold and flu products may have side effects. With proper use, it can be an ideal solution in the fight against cold and flu symptoms.

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Specifičnosti rada medicinske sestre u polivalentnoj patronaži

Specificity of the Work of Nurses in Polyvalent Patronage

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Apstrakt

Poseta polivaletne patronaže u kući orijentisana je, pre svega, na prevenciju i edukaciju u porodici ili zajednici, uz maksimalno učešće i poštovanje korisnika.

Dobra saradnja sa timovima primarne zdravstvene zaštite, lokalnom zajednicom, udruženjima pacijenata, centrom za socijalni rad, centrima za kućnu negu i mnogim drugim subjektima sa kojima patronažna sestra kontaktira, u interesu je korisnika. Patronažna sestra je fokusirana na korisnika, a korisnik može biti pojedinac, porodica ili zajednica. Svima njima pruža pomoć u zadovoljavanju osnovnih potreba kroz primarnu, sekundarnu i tercijarnu prevenciju:
– primarna prevencija (sprovodi se u zdravoj populaciji sa ciljem promovisanja zdravlja i postizanja pozitivnog zdravstvenog ponašanja, odnosno razumevanja zdravlja, kao prave vrednosti koju treba unaprediti tokom života),
– sekundarna prevencija (pokušaji blagovremenog prepoznavanja i otkrivanja rizika koji dovode do neravnoteže i štete po zdravlje, a već prouzrokovane štete koja nije dovela do trajnih promena kod pojedinca) i
– tercijarna prevencija (medicinska sestra pomaže u ponovnom uspostavljanju balansa, sprečavajući fizičku i psihičku dekompenzaciju korisnika posle nastalih oštećenja i komplikacija koje nastaju nakon toga, odnosno, pomaže uspostaviti obrazac funkcionisanja kod pojedinaca koji imaju trajno i nepopravljivo oštećenje funkcije organizma).

Holistički pristup pacijentu nije koncentrisan samo na jedan problem, ona vodi računa o sadašnjosti i potencijalu problema i prepoznaje izvore pomoći i podrške. Osnovni način rada medicinske sestre u polivalentnoj patronaži je edukacija, a osnovno sredstvo su komunikacione veštine. Specifičnost rada patronažne sestre je da se odvija van zdravstvene ustanove, na mestima gde ljudi žive i rade. Patronažna sestra promoviše važnost zdravlja, poboljšanja zdravlja, prevencije i rehabilitacije bolesti u kući, porodici ili zajednici.

Patronažna zdravstvena zaštita je profesionalna oblast sestrinske delatnosti, zasnovana na principima primarne zdravstvene zaštite, koji korisnicima garantuju:
– kvalitet pruženih usluga,
– dostupnost,
– nepristrasnost u pružanju nege,
– razumevanje ličnih, porodičnih i društvenih potreba i mogućnosti i
– efikasno pružanje nege uz kontinuirano praćenje rezultata i dostignuća.

Abstract

The visit of polyvalent patronage in the house is primarily oriented towards prevention and education within the family or community, with maximum participation and respect of the user.

Good cooperation with primary health care teams, local community, patient associations, social work centers, home care centers, and many other subjects with whom the visiting nurse contacts in the interest of the user. The visiting nurse is focused on the user, and the user can be an individual, a family, or a community. It provides assistance to all of them in meeting their basic needs through primary, secondary, and tertiary prevention:
– primary prevention (carried out in a healthy population to promote health and achieve positive health behavior, i.e. understanding health as a true value that should be improved during life),
– secondary prevention (attempts to timely recognize and detect risks that lead to imbalance and damage to health, and already caused damage that did not lead to permanent changes in the individual) and
– tertiary prevention (the nurse helps in re-establishing the balance, preventing physical and psychological decompensation of the user after the damage and complications that arise after that, i.e. helps to establish a functioning pattern in individuals who have permanent and irreparable damage to the body's function).

A holistic approach to the patient is not focused only on one problem, it takes into account the present and potential problems and recognizes the sources of help and support. The basic way of the nurse`s work in polyvalent patronage is education, and the basic tool is communication skills. The specificity of the work of a visiting nurse is that it takes place outside the health care facility, in places where people live and work. The community nurse promotes the importance of health, health improvement, disease prevention, and rehabilitation in the home, family, or community.

Patronage health care is a professional area of nursing activity based on the principles of primary health care, which guarantees users:
– quality of services provided,
– availability,
– impartiality in providing care,
– understanding of personal, family, and social needs and possibilities and
– efficient provision of care with continuous monitoring of results and achievements.

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Cilj u sprovođenju patronažne posete je usmeren na dve glavne grupe rešenja, postavljenih zadataka, koji se odnose na:
– Promovisanje i očuvanje zdravlja i prevenciju bolesti kod: novorođenčadi, odojčadi, male dece i predškolske dece, školske dece i omladine, posebno žena u trudnoći, babinjara, starih i nemoćnih lica, osoba sa posebnim potrebama, osoba sa rizičnim ponašanjem i lošim životnim navikama.
– Prepoznavanje, blagovremeno otkrivanje i zbrinjavanje bolesnih i nemoćnih koje se sprovodi tamo gde ljudi žive i rade, a najčešće u svojim domovima.

Patronažna sestra ima važan zadatak u javnom zdravlju i unapređenju i očuvanju zdravlja i usmerena je na korisnika, a korisnik može biti pojedinac, porodica ili zajednica. Osnovna delatnost medicinske sestre u vanbolničkoj nezi je edukacija, pojedinca ili grupe. Osnovna veština koja je potrebna medicinskoj sestri u polivaletnoj patronaži je komunikacija.

The goal in conducting the patronage visit is focused on two main groups of solutions to the set tasks, which relate to:
– Promotion and preservation of health and disease prevention in newborns, infants, small children, preschool children, school children, and youth, especially pregnant women, midwives, old and infirm persons, persons with special needs, and persons with risky behavior and bad lifestyle habits.
– Recognition, timely detection, and care of the sick and infirm, which is carried out where people live and work, and most often in their homes.

The community nurse has an important task in public health and the promotion and preservation of health and is focused on the user, and the user can be an individual, a family, or a community. The main activity of a nurse in outpatient care is education, of an individual or a group. The basic skill that a nurse needs to master in polyvalent patronage is communication

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APSTRAKT 30S 2024; 5(1): 44–44 ABSTRACT 30E

Profilaksa venskog tromboembolizma kod ortopedskih pacijenata

Prophylaxis of Venous Thromboembolism in Orthopedic Patients

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Apstrakt

Venski tromboembolizam je treća najčešća venska bolest. Javlja se u 600.000 slučajeva godišnje u USA, dok je 200.000 slučajeva pulmonarnog embolizma (PE) godišnje. Pulmonarni embolizam ostaje vodeći faktor smrti u bolnici, koji se može prevenirati. Rizične kategorije za venski tromboembolizam kod hirurških pacijenata su: 1. nizak rizik je u slučajevima male hirurgije kod pacijenata mlađih od 40 godina, bez dodatnih faktora rizika; 2. srednji rizik je u slučajevima male hirurgije kod pacijenata sa dodatnim rizičnim faktorom, ili hirurške intervencije kod pacijenata 40–60 godina, bez dodatnih faktora rizika; 3. visok rizik je u slučajevima hirurgije, kod pacijenata >60 godina, ili hirurške intervencije kod pacijenata 40–60 godina, sa dodatnim faktorom rizika; 4. najveći rizik je u slučajevima hirurgije kod pacijenata >40 godina sa multiplim faktorima rizika, ili artroplastike kuka i kolena, hirurgije preloma kuka, ili velike traume, povredom kičmene moždine.

Velike ortopedske operacije, uključujući ugradnju veštačkog kuka i kolena, kao i operacije preloma kuka, nose visok rizik za nastanak DVT. Bez profilakse, istorijski podaci pokazuju da se DVT javlja kod 40–60% pacijenata, nakon 7–14 dana od operacije. Sa rutinskom primenom tromboprofilakse, simptomatski slučajevi VTE kod pacijenata unutar 3 meseca od operacije su oko 1,3–10%.

Strategija profilakse može smanjiti rizik od VTE, DVT i pulmonarnog embolizma. Glavno ograničenje farmakološke VTE profilakse je rizik od krvarenja, koje nastaje kod 1–3% THR i TKR operacija.

Rizik od VTE značajno je povećana kod: prisustva aktivnog karcinoma/onkološke terapije, starijih od 60 godina života, dehidratacije, utvrđene trombofilije, gojaznosti, jednog ili više značajnih medicinskih komorbiditeta, lične ili porodične anamneze za VTE, hormonske terapije – oralni kontraceptivi, visoke doze progestogena, kod selektivnih modulatora estrogenskih receptora, varikoznih vena sa udruženim flebitisom, i kod trudnoće ili u periodu 6 nedelja posle porođaja.

Abstract

Venous thromboembolism is the third most common venous disease. It occurs in 600,000 cases per year in the USA compared to 200,000 cases of pulmonary embolism (PE) per year. Pulmonary embolism remains the leading preventable cause of in-hospital death. The risk categories for venous thromboembolism in surgical patients are 1 The risk is low in cases of minor surgery in patients younger than 40 years without additional risk factors; 2 Medium risk is in cases of minor surgery in patients with additional risk factors, or surgical intervention in patients 40-60 years old without additional risk factors; 3 The risk is high in cases of surgery in patients >60 years old, or surgical intervention in patients 40-60 years old with an additional risk factor; 4 The greatest risk is in cases of surgery in patients >40 years of age with multiple risk factors, or hip and knee arthroplasty, hip fracture surgery, or major trauma, spinal cord injury.

Major orthopedic surgery including hip and knee replacement as well as hip fracture surgery carry a high risk of DVT. Without prophylaxis, historical data show that DVT occurs in 40–60% of patients 7–14 days after surgery. With routine use of thromboprophylaxis, symptomatic cases of VTE in patients within 3 months of surgery are about 1.3–10%.

A prophylaxis strategy can reduce the risk of VTE, DVT, and pulmonary embolism. The main limitation of pharmacological VTE prophylaxis is the risk of bleeding, which occurs in 1–3% of THR and TKR operations.

The risk of VTE is significantly increased in the presence of active cancer / oncological therapy, over 60 years of age, dehydration, established thrombophilia, obesity, one or more significant medical comorbidities, personal or family history of VTE, hormone therapy - oral contraceptives, high doses of progestogens, selective estrogen receptor modulators, varicose veins with associated phlebitis, and pregnancy or the 6-week postpartum period.

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APSTRAKT 31S 2024; 5(1): 45–46 ABSTRACT 31E

Hirurško lečenje otvorenih preloma potkolenice
Surgical Treatment of the Lower Leg Open Fractures

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Apstrakt

Otvoreni prelomi potkolenice spadaju u grupu najčešćih otvorenih preloma i čine 63% svih otvorenih preloma lokomotornog sistema. Najčešće su rezultat dejstva sile velike energije u sklopu saobraćajnog traumatizma.

Otvoreni prelomi potkolenice, zbog teškog oštećenja mekih tkiva, izražene kominucije preloma, gubitka koštanog tkiva i potencijalne infekcije mogu da predstavljaju težak terapijski problem. Hirurško lečenje podrazumeva primarnu hirurišku obradu rane otvorenog preloma i primenu metoda spoljašnje skeletne ili unutrašnje fiksacije (intramedularne), kod otvorenih preloma I i II stepena. Klasifikacije otvorenih preloma su, uglavnom, terapijske i imaju za cilj da ukažu na protokol lečenja otvorenih preloma. Najčešća klasifikacija otvorenih preloma potkolenice je klasifikacija po R. Gustil-u.

Lečenje otvorenih preloma potkolenice prati čitav niz komplikacija i to: infekcija rane otvorenog preloma, duboka koštana infekcija – osteitis, usporeno zarastanje, zarastanje preloma u lošoj poziciji, nezarastanje preloma i gubitak ekstremiteta. Cilj lečenja je zarastanja otvorenog preloma potkolenice i povratak funkcije povređenog ekstremiteta na nivo pre povređivanja, što omogućava pacijentu vraćanje njegovim radnim i životnim aktivnostima.

U savremenoj traumatologiji i dalje se vodi debata o izboru metode fiksacije preloma tibije i hirurškom rešavanju oštećenog mekotkivnog omotača potkolenice. Spoljna skeletna fiksacija predstavlja standardnu metodu za stabilizaciju svih otvorenih preloma potkolenice, osim otvorenih preloma I, II stepena po Gustillu, kada se može primeniti i untrašnja fiksacija, intramedularnim klinom. Spoljna skeletna fiksacija obezbeđuje dobre biomehaničke uslove za sanaciju otvorenog preloma potkolenice, omogućava dobar pristup i negu rane i ne ometa pokrete u kolenom i skočnom zglobu. Postoperativno, bolesnici započinju sa ranom mobilizacijom, hodom i pokretima u kolenom i skočnom zglobu. Problem koji se sreće kod metode spoljne skeletne fiksacije je česta mekotkivna i koštana infekcija oko klinova spoljnog skeletnog fiksatora, pogotovo kod nošenja spoljnog fiksatora duže od 6 meseci.

Danas je u savremenoj traumatologiji sve popularnija primarna intramedularna fiksacija otvorenih preloma I, II i IIIa stepena, uz dobar debridman rane. Uloga intramedularne fiksacije kod otvorenih preloma IIIB stepena i dalje predstavlja kontroverzu. Alternativni metod u lečenju težih otvorenih preloma predstavlja i odložena intramedularna fiksacija, nakon primarne spoljne skeletne fiksacije.

Rana otvorenog preloma, nakon primarne hirurške obrade i spoljne skletne fiksacije primarno se ne zatvara, već se ostavlja

Abstract

Open fractures of the lower leg are among the most common open fractures and comprise 63% of all open fractures of the locomotor system. Most often, they are the result of the action of high-energy forces as part of traffic trauma.

Open fractures of the lower leg, due to severe soft tissue damage, severe comminution of the fracture, loss of bone tissue, and potential infection can represent a difficult therapeutic problem. Surgical treatment includes primary surgical treatment of open fracture wounds and application of external skeletal or internal (intramedullary) fixation methods, in open fractures of the first and second degree. Classifications of open fractures are mainly therapeutic and aim to indicate the treatment protocol for open fractures. The most common classification of open fractures of the lower leg is the classification according to R. Gustilo.

The treatment of open fractures of the lower leg is accompanied by a whole series of complications, namely: infection of the open wound with a pellicle, deep bone infection - osteitis, delayed healing, healing of fractures in a bad position, non-healing of fractures, and loss of limbs. The goal of treatment is the healing of an open fracture of the lower leg and the return of the function of the injured limb to the level before the injury, which allows the patient to return to his work and life activities.

In general traumatology, there is still a debate about the choice of the tibial fracture fixation method and the surgical treatment of the damaged soft tissue sheath of the lower leg. External skeletal fixation is the standard method for stabilization of all open fractures of the lower leg, except for open fractures of the I, and II degrees according to Gustilo, when internal fixation can also be applied, with an intramedullary wedge. External skeletal fixation provides good biomechanical conditions for the repair of open tibial fracture, allows good access and care of the wound, and does not interfere with movements in the knee and ankle joints. Postoperatively, patients begin early mobilization, walking, and knee and ankle movements. The problem encountered with the method of external skeletal fixation is frequent soft tissue and bone infection around the pegs of the external skeletal fixator, especially when the external fixator is worn for longer than 6 months.

Today, in modern traumatology, primary intramedullary fixation of open fractures of the I, II and IIIa degrees with good debridement of the wound is increasingly popular. The role of intramedullary fixation in grade IIIB open fractures is still controversial. An alternative method in the treatment of more severe open fractures is delayed intramedullary fixation after primary external skeletal fixation.

The wound of an open fracture, after primary surgical treatment and external joint fixation, is not primarily closed, but left

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otvorena. Rana otvorenog preloma zatvara se, kada smo sigurni da nema znakova infekcije, primarno odloženim, sekundarnim šavom ili nekom od metoda plastične hirurgije (fasciokutani, mikrovaskularni režanj), što zavisi od veličine defekta mekih tkiva. Ranu intravensku antibiotsku terapiju, kod otvorenih preloma potkolenice, treba započeti odmah po prijemu povređenog. Obično se ordinira trokomponentna antibiotska terapija. Antibiotska terapija se nastavlja 48 do 76 sati kod otvorenih preloma I i II stepena, dok se kod otvorenih preloma III stepena može produžiti do 120 sati nakon otvorenog preloma i primarnog debridmana rane.

Primarna obrada rane otvorenog preloma potkolenice, spoljna skeletna fiksacija, antibiotska terapija i antitetanusna zaštita, rano pokrivanje i rekonstrukcija kožnog i mekotkivnog defekta predstavljaju elemente od velike važnosti u spašavanju potkolenog segmenta i dobrog funkcionalnog oporavka.

open. The wound of an open fracture is closed, when we are sure that there are no signs of infection, with a primary delayed, secondary suture or one of the methods of plastic surgery (fasciocutaneous, microvascular flap), which depends on the size of the soft tissue defect. Early intravenous antibiotic therapy for open lower leg fractures should be started immediately upon admission. Three-component antibiotic therapy is usually prescribed. Antibiotic therapy is continued for 48 to 76 hours in open fractures of the I and II degrees, while in open fractures of the III degree, it can be extended up to 120 hours after the open fracture and primary debridement of the wound.

Primary treatment of an open lower leg fracture wound, external skeletal fixation, antibiotic therapy, and anti-tetanus protection, early coverage, and reconstruction of the skin and soft tissue defect are elements of great importance in saving the lower leg segment and good functional recovery.

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Diferencijalna dijagnostika pluća u datoj epidemiološkoj situaciji

Differential Diagnosis of Lungs in a Given Epidemiology Situation

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Apstrakt

Pluća, kao jedan od najvažnijih organa u organizmu, obolevanjem dovode do lošijeg života pacijenta. Shodno tome neophodnost rane dijagnoze je bila potreba od samog početka izučavanja u medicini. Tačna i pravovremena dijagnoza je preko značajna za lečenje, pa se ona danas postavlja uz pomoć auskultacije, kao i korišćenjem radioloških metoda, konvencionalnom radiologijom (RTG) ili MSCT i drugim pratećim metodama.

Radiološke metode koje se koriste sa velikom preciznošću postavljaju dijagnoze kod bolesti pluća.

Sve bolesti pluća možemo podeliti na:
1. zapaljenjske, infektivne i neinfektivne
2. opstruktivne kardiološke
3. tumore.

U svim ovim bolestima radiografija, a posebno kompjuterizovana tomografija, igraju ogromnu ulogu u dijagnostici samih oboljenja, a samim tim i u odluci o daljem lečenju.

Aktuelna epidemiološka situacija sa kovid-19 je pokazala da rtg pluća ima preko poseban diferencijalno dijagnostički značaj.

Abstract

The lungs, as one of the most important organs in the body, lead to a worse quality of life for the patient. Accordingly, the necessity of early diagnosis was a necessity from the very beginning of studying medicine. An accurate and reliable diagnosis is extremely important for treatment, so today it is established with the help of auscultation as well as with the use of radiological methods.

Conventional radiology (X-ray) or MSCT and other accompanying methods.

The radiological methods that are used have been widely used since their inception with great precision in the diagnosis of lung diseases.

All lung diseases can be divided into:
1. Astonishing infectious and non-infectious
2. Obstructive cardiac
3. Tumors

In all these diseases, radiography and especially computed tomography play a huge role in the diagnosis of the diseases themselves and thus also in the decision on further treatment.

The current epidemic situation with COVID-19 has shown that the X-ray of the lungs has a very special differential diagnostic value.

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APSTRAKT 33S 2024; 5(1): 48–48 ABSTRACT 33E

Retki slučajevi krvnih grupa
Rare Cases of Blood Groups

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Apstrakt

Veoma je teško definisati retku krvnu grupu, a svaka podela može da bude kontroverzna i heterogena. Zbog rasne, etničke i geografske raznolikosti, retka krvna grupa se tumači u zavisnosti od oblasti i populacije koja je predmet istraživanja. Retka krvna grupa je ona koja ispunjava jedan od sledeća tri uslova: odsustvo ekspresije antigena velike učestalosti na eritrocitima, odsustvo ekspresije nekoliko antigena istog krvnogrupnog sistema na eritrocitima ili odsustvo ekspresije multipnih antigena „balansirane" učestalosti (1 do 99%), u opštoj populaciji, u okviru nekoliko krvnogrupnih sistema eritrocita. U svetu postoje nacionalni i internacionalni paneli davalaca retkih krvnih grupa, od kojih je jedan pod pokroviteljstvom Međunarodne laboratorije za krvne grupe u Bristolu, kao i Evropska banka retke krvi, koja je pod pokroviteljstvom Saveta Evrope.

Osnovna definicija koju je dala Radna grupa za davaoce retkih krvnih grupa Međunarodnog udruženja za transfuziju krvi je da je retka jedinica krvi ona koja nije dostupna u trenutku kada je pacijentu potrebna transfuzija. Postoje pacijenti koji zahtevaju proširene fenotipizacije, čak i genotipizacije jedinica krvi. Veliki problem predstavljaju zahtevi za fenotipiziranom jedinicom krvi koja na svojim eritrocitima nema antigen velike učestalosti. Ponekad je učestalost takve jedinice krvi manja od 1 prema 10000 ispitanih davalaca, nekada i ređa. Dodatne komplikacije proizilaze iz podataka o ABO i RhD krvnogrupnoj pripadnosti pacijenta, kao i istovremenog prisustva antitela protiv klinički značajnih antigena velike učestalosti. Drugi tip retke jedinice krvi je ona koja bi trebalo da bude negativna za više antigena velike učestalosti, što predstavlja veliku teškoću u pronalaženju odgovarajućeg davaoca.

Dostupnost davalaca krvi sa retkim fenotipovima ili genotipovima može da se razlikuje između zemalja, ali je krv sa nekim fenotipovima, kao što je Rhnull ili Kell0 u skoro svakoj državi teško obezbediti. Potreba za organizovanim upravljanjem informacijama o davaocima retkih grupa prepoznata je davno, kada je 1965. godine Međunarodno udruženje za transfuziju krvi ustanovilo koncept Internacionalnog panela retkih davalaca. Radna grupa za retke davaoce zemalja članica Međunarodnog udruženja za transfuziju krvi podržava kontinuirano pronalaženje davalaca retkih krvnih grupa, prikupljanje podataka o njima u okviru Internacionalnog panela retkih davalaca i obezbeđivanje njihove krvi za pacijente širom sveta.

Službe za transfuziju krvi svake zemlje trebalo bi da imaju podatke o najređim krvnim grupama na njihovom podneblju. Kada se pojavi potreba za nekom od njih, važno je obavestiti klinicare o teškoćama koje mogu da nastanu zbog dužine čekanja na obezbeđenje krvi odgovarajućeg fenotipa.

Abstract

It is quite difficult to define a rare blood group, and each division might be controversial and heterogeneous. Because of racial, ethnic, and geographic diversity, rare blood types are interpreted depending on the area and population that is being studied. A rare blood group fulfills one of the following three conditions: the absence of expression of antigens of high frequency on erythrocytes, the absence of expression of several antigens of the same blood corpuscle system on erythrocytes, or the absence of expression of multiple antigens of "balanced" frequency (1 to 99%), in the general population, within several hematopoietic systems of erythrocytes. There are national and international panels of donors of rare blood groups in the world, one of which is under the auspices of the International Blood Group Laboratory in Bristol, as well as the European Rare Blood Bank, which is under the auspices of the Council of Europe.

The basic definition given by the Working Group on Rare Blood Group Donors of the International Association for Blood Transfusion is that a rare unit of blood is one that is not available at the time the patient needs a transfusion. Some patients require extended phenotyping, even genotyping of blood units. A big issue is the requirement for a phenotyped blood unit that does not have a high-frequency antigen on its erythrocytes. Sometimes the frequency of such a unit of blood is less than 1 per 10,000 tested donors, sometimes even less. Additional complications emerge from data on the ABO and RhD blood type of the patient, as well as the simultaneous presence of antibodies against clinically significant antigens of high frequency. Another type of rare unit of blood is that which should be negative for several antigens of high frequency, which presents a great difficulty in finding a suitable donor.

The availability of blood donors with rare phenotypes or genotypes may vary between countries, but blood with some phenotypes, such as Rhnull or Kell0, is difficult to obtain in almost every country. The need for organized management of information on donors of rare groups was recognized long ago when in 1965 the International Association for Blood Transfusion established the concept of the International Panel of Rare Donors. The Rare Donor Working Group of the member countries of the International Association for Blood Transfusion supports the continuous finding of donors of rare blood groups, the collection of data about them within the International Panel of Rare Donors, and the provision of their blood to patients worldwide.

Blood transfusion services in each country should have data on the rarest blood groups in their climate. When there is a need for one of them, it is necessary to inform the clinicians about the difficulties that may appear due to the length of the wait for the provision of blood of the appropriate phenotype.

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– for an e-journal article: Morse SS. Factors in the emergence of infectious diseases. Emerg Infect Dis (serial online) 1995 Jan-Mar [cited 1996 Jun 5]; 1(1) (24 screens). Available from: URL: http://www.cdc.gov/ncidod/EID/eid.htm
– for an electronic monograph: CDI, clinical dermatology illustrated (monograph on CD-ROM). Reeves JRT, Maibach H. CMEA Multimedia Group, producers. 2nd ed. Version 2.0. San Diego: CMEA; 1995
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