



Organisation of Thrombosis & Hemostasis (T&H) Service How Does it Function in Stockholm?

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Abstract

Hemostasis is an important part of human body homeostasis and therefore both congenital and acquired hemostatic disorders need to be properly diagnosed and treated. However, organization of thrombosis & hemostasis (T&H) service (sometimes also called Hemophilia & Thrombosis) is not unified around the world. Despite some attempts to suggest both clinical and laboratory curriculums for health care practitioners within the field it is still not always clear to which department and professionals to turn, when being in need of advice for proper laboratory and clinical approach. Usually T&H service may fully or partially belong to different health care providers from laboratory & transfusion medicine to hematology, general medicine, cardiology or even vascular surgery departments. This author suggests that it is of importance that service is performed by those who are most experienced and knowledgeable, irrespectively of the clinical placement. The most appreciated is the Anglo-Saxon model present in many British and USA centers as separate units which include both laboratory diagnostics and clinical service. Proper organization of T&H service is of importance not only for the patients, health-care providers and taxpayers but also enables development of high-quality research.

This model was also present in two most comprehensive Swedish T&H centers (Malmö and Stockholm) but nowadays clinical and laboratory parts belong to different clinics/departments.

In Stockholm the clinical part of the T&H service belongs to the Hematology Clinic. One smaller out-patients anticoagulant clinic is located in the large hospital south of the city. Specialized registered nurse (RN) takes care about newly diagnosed patients with thrombosis and follow up other Warfarin and DOACs treated patients (e.g. atrial fibrillation and mechanical valves). The main clinical part is situated in the New Karolinska Hospital in the north part of the city taking care of patients with both bleeding and thrombosis. Hemophilia comprehensive center offers live-long service for patients with congenital bleeding disorders from Stockholm and entire Sweden north of Stockholm. Consulting service (including 24/7 on-call) is available for

both Karolinska Hospital in-patients as well as for other health care providers in Stockholm County but also for the rest of Sweden. This service is provided together with children coagulations specialists. Several adult medical doctors (MDs) with different specialist backgrounds and pediatricians with sub-specialization in the coagulation medicine together with several RNs are partly or full time employed by the hospital.

Laboratory part of T&H service belongs to the Clinical Chemistry which is a part of Karolinska University Laboratory a part of Medical Diagnostic Karolinska situated in the six hospitals within Stockholm County. Routine coagulation tests (PT, APTT, fibrinogen, D-dimer, antithrombin and Anti-Xa) are available in all six hospitals as 24/7 service performed by registered biomedical scientists (BMSs). Physician and biochemist/engineer are support through Matrix organization. Specialized coagulation includes some 24/7 available tests (FVIII, vWF, Multiplate platelets function etc.) while the rest of specialized service includes full thrombosis/thrombophilia (e.g. AT, PC, PS, lupus anticoagulant) and bleeding disorders (e.g. hemophilia A & B, von Willebrand disease, platelet function disorders) investigations including genetic testing. This service is performed by specialized BMSs also supported by MD and biochemist/engineer. MD is also responsible for the written interpretation of laboratory findings.

Despite belonging to different clinics/departments both clinical and laboratory T&H services at Karolinska University Hospital are closely associated with everyday informal contacts and several formal meetings during the week (including once a week doctor rounds).

In conclusion, even if clinical and laboratory parts of T&H are physically separated and belong to different clinics/departments it would be desirable that T&H service functionally, albeit informal, represent a common single unit. Such an approach offers best potential care to the patients with bleeding and thrombosis, helps the structurization of the health-care system and also contributes to the excellence in the research.





Perkutana epiduralna neuroplastika sa FORA-B kateterom

Percutaneous Epidural Neuroplasty with FORA-B Catheter

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Apstrakt

Epiduralne adhezije izazivaju bol tako što ometaju slobodno kretanje kičmenih nerava i povećavaju neuralnu osetljivost kao posledicu neuralne kompresije. Da bi se uklonile adhezije i dostavili ubrizgani lekovi na ciljna mesta, perkutana epiduralna adhezioliza (PEA) izvodi se kod pacijenata koji ne reaguju na konzervativne tretmane. Metoda se izvodi novorazvijenim balon kateterom na naduvavanje radi efikasnijeg PEA i ublažavanja stenozе. Kod sadašnjih pacijenata tretmani ponavljajućim epiduralnim injekcijama steroida i/ili PEA sa Rac-kateterom ili Navi-Cath-om nisu dali dugotrajne efekte ili funkcionalna poboljšanja. Međutim, PEA i dekompresija sa balon kateterom na naduvavanje doveli su do održavanja olakšanja bola više od sedam meseci i poboljšanja funkcionalnog statusa sa povećanjem udaljenosti hoda. Ova metoda sugerise da balon kateter na naduvavanje može biti efikasna alternativa izvođenju PEA kada konvencionalne metode ne uspeju da uklone adhezije ili u dovoljnoj meri ublaže stenozu.

Nakon dobijanja pismenog informisanog pristanka pacijenta, on se smešta u ležeći položaj sa jastukom ispod stomaka da bi se svela na minimum lumbalna lordoza. Procedura se sprovodi u aseptičnim uslovima. Nakon orijentacije i identifikacije sakralnog otvora i davanja lokalnog anestetika (lidokain 2%, 4 ml) plasira se igla od 10 G, koja je posebno dizajnirana da spreči sečenje i ljuštenje katetera u epiduralni prostor kroz sakralni hiatus. Epiduralni prostor je identifikovan injekcijom kontrastnog sredstva (omnipak) pod fluoroskopijom. Nakon toga se uvodi kateter sa balončićem na vrhu do ciljanog intervertebralnog otvora na kojem postoji defekt u rasprostiranju kontrasta, a sve pod kontrolom fluoroskopa. Kada se dođe do željenog nivoa i otvora, uradi se mehanička adhezioliza naduvavanjem balončića na vrhu katetera. Nakon toga, na tom se mestu aplicira lokalni anestetik (l-bupivakain), kortikosteroid, i hipertoni NaCl. Nakon procedure pacijent se posle 2–3 časa otpušta kući sa savetom za vežbe i dalje kontrole. U UKC Kragujevac je do sada ovom metodom lečeno 5 pacijenata bez komplikacija pri izvođenju intervencije i neposredno posle nje. Svih 5 pacijenata su pokazala značajno smanjenje bola na VAS skali, više od 50%, kao i mogućnost fizičke aktivnosti. Trenutno se vrši njihova dalja evaluacija i praćenje dugotrajnosti efekta, kao i kvalitet života nakon intervencije, a sa rezultatima ćemo izaći nakon 6 meseci.

Abstract

Epidural adhesions cause pain by interfering with the free movement of spinal nerves and increasing neural sensitivity as a result of neural compression. To remove adhesions and deliver injected drugs to target sites, percutaneous epidural adhesionolysis (PEA) is performed in patients unresponsive to conservative treatments. The method is performed with a newly developed inflatable balloon catheter for more effective PEA and relief of stenosis. In the present patients, treatments with repeated epidural injections of steroids and/or PEA with the Rac catheter or NaviCath did not produce long-term effects or functional improvements. However, PEA and decompression with an inflatable balloon catheter resulted in sustained pain relief for more than seven months and improved functional status with increasing walking distance. This method suggests that an inflatable balloon catheter may be an effective alternative to performing PEA when conventional methods fail to remove adhesions or sufficiently relieve stenosis.

After obtaining the patient's written informed consent, the patient is placed in the supine position with a pillow under the abdomen to minimize lumbar lordosis. The procedure is carried out in aseptic conditions. After orientation and identification of the sacral opening and administration of local anesthetic (Lidocaine 2%, 4ml), a 10 G needle is placed, which is specially designed to prevent cutting and peeling of the catheter into the epidural space through the sacral hiatus. The epidural space was identified by injection of a contrast medium (Omnipak) under fluoroscopy. After that, a catheter with a balloon on the tip is introduced to the targeted intervertebral opening where there is a defect in contrast distribution, all under the control of a fluoroscope. When the desired level and opening are reached, mechanical adhesionolysis is performed by inflating the balloon on the tip of the catheter. After that, a local anesthetic (L-bupivacaine), a corticosteroid, and hypertonic NaCl are applied to that area. After the procedure, the patient is discharged home after 2-3 hours with advice on exercises and further controls. At UCC Kragujevac, 5 patients have been treated with this method so far without complications during the procedure and immediately after the intervention. All 5 patients showed a significant reduction in pain on the VAS scale, more than 50%, as well as the possibility of physical activity. Currently, further evaluation and monitoring of the longevity of the effect and the quality of life after the intervention are being carried out, the results of which will be published after 6 months.



Refrakcione anomalije kod dece predškolskog uzrasta

Refraction Anomalies in Preschool Children

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Apstrakt

Zdravo oko podrazumeva kvalitetnu vidnu oštrinu na daljinu i blizinu bez napora. Oko predstavlja vrstu mračne komore (*camera obscura*) sa unutrašnje strane, obloženu pigmentnim slojem. Svetlosni zraci u unutrašnjost oka ulaze kroz zenicu koja automatski reguliše njihovu količinu. Sa druge strane složeni, sabirni optički sistem omogućava stvaranje lika predmeta na mrežnjači, tačnije u makuli (foveji). Ovde deluju dva faktora zajedno: prelomna moć optičkog sistema i dužina oka. Odnos između dužine oka i prelomne moći sočiva bez učešća akomodacije naziva se refrakcijom. Izučavanje refrakcije i akomodacije podrazumeva primenu optičkih zakona o prelamanju svetlosti na živom oku. Stanje kada su dužina oka i prelomna moć sočiva podešeni tako da omogućavaju stvaranje jasnog, oštrog lika u makuli (foveji) naziva se emetropija.

Refrakcione anomalije (ametropia) nastaju kada je poremećen odnos između dužine oka i prelomne moći sočiva. Poremećaj refrakcije može biti kornealnog, lentalnog ili aksijalnog porekla.

Kornealna ametropija:

- kornealna miopija – kod keratokonusa i keratoglobusa,
- kornealna hipermetropija – kod zaravnjenja rožnjače (*cornea plana*),
- kornealni astigmatizam – usled različite zakrivljenosti rožnjače u svim meridijanima.

Lentalna ametropija:

- lentalna miopija – kod pomeranja sočiva napred (subluxatio) usled bubrenja sočiva kod katarakte ili skleroze nukleusa sočiva,
- lentalna hipermetropija – najčešće usled afakije, a ređe usled pomeranja sočiva unazad.

Aksijalna ametropija:

- miopija – bulbus je izdužen i osovina može da bude čak 25 – 30 mm,
- hipermetropija – bulbus je smanjen, postoji blag stepen mikroftalmusa.

Najčešće se javljaju aksijalne, zatim lentalne, a najređe kornealne refrakcione anomalije. U svim slučajevima stvara se nejasan lik na mrežnjači. Predstavljaju najčešće promene koje se sreću u oftalmološkoj praksi, a to su: dalekovidost – hipermetropi, kratkovidost – myopia i astigmatizam – astigmatizmus.

Kod emetropije, miopije, hipermetropije prelomljeni zraci se seku u jednoj tački i oni predstavljaju osnovne vidove refrakcije, dok je astigmatizam kombinacija osnovnih vidova refrakcije.

Abstract

A healthy eye implies quality visual acuity at a distance and near without effort. The eye is a type of dark chamber (*camera obscura*) covered with a pigment layer on the inside. Light rays enter the interior of the eye through the pupil, which automatically regulates their amount. On the other hand, a complex, collecting optical system enables the creation of an image of an object on the retina, more precisely in the macula (fovea). Here, two factors work together: the refractive power of the optical system and the length of the eye. The relationship between the length of the eye and the refractive power of the lens without the participation of accommodation is called refraction. The study of refraction and accommodation implies the application of laws of optics on the refraction of light on the living eye. The condition when the length of the eye and the refractive power of the lens are adjusted in such a way as to allow the creation of a clear, sharp image in the macula (fovea) is called emmetropia.

Refractive anomalies (ametropia) occur when the relationship between the length of the eye and the refractive power of the lens is disturbed. The refractive error can be of corneal, lental or axial origin.

Corneal ametropia:

- Corneal myopia - in keratoconus and keratoglobus,
- Corneal hypermetropia - when the cornea is flattened (*cornea plana*),
- Corneal astigmatism - due to the different curvature of the cornea in all meridians.

Lens ametropia:

- Lental myopia - when the lens moves forward (subluxatio) due to swelling of the lens due to cataract or sclerosis of the lens nucleus,
- Lens hypermetropia - most often due to aphakia, and less often due to backward movement of the lens

Axial ametropia:

- Myopia - the bulb is elongated and the axis can be as much as 25-30mm
- Hypermetropia - the bulb is reduced, and there is a mild degree of microphthalmus

The most common are axial, then lens, and the rarest corneal refractive anomalies. In all cases, a vague image is created on the retina. They represent the most common changes encountered in ophthalmological practice, namely: farsightedness - hypermetropia, shortsightedness - myopia and astigmatism - astigmatism.

In emmetropia, myopia, and hypermetropia, the refracted rays intersect at one point and they represent the basic types of refraction, while astigmatism is a combination of the basic types of refraction.

Miopia – kratkovidost

Kod kratkovidosti se javlja jaka prelomna moć sočiva i velika dužina oka. Predmeti koji se nalaze u daljini ne mogu se videti jasno, jer mesto stvaranja jasnog lika se nalazi ispred mrežnjače (makule). U kliničkom pogledu kratkovidost se deli na: benignu (školsku) i malignu (progredirajuću) miopiju.

Hypermetropia – dalekovidost

Kod dalekovidosti se javlja slaba prelomna moć sočiva i mala dužina oka. Mesto stvaranja jasnog lika se nalazi iza mrežnjače (makule). Postoje sledeći oblici dalekovidosti: totalna hipermetropija, latentna hipermetropija i manifestna hipermetropija.

Astigmatizmus

Refrakciona anomalija koja je uslovljena nepravilnom zakrivljenošću rožnjače tako da je prelomna moć rožnjače različita u raznim meridijanima. Postoji pravilan (regularis) i nepravilan (irregularis) astigmatizam. Pravilan astigmatizam može biti: prost astigmatizam (as. simplex), složeni (as. compositum) i mešoviti (as. mixtum).

Postoje slučajevi da refrakcija oba oka nije ista – anisometropia. Jedno oko može da bude emetropno, a drugo da ima bilo koji vid refrakcije.

Refrakcione anomalije se leče korekcijskim staklima (konkavna, konveksna, cilindrična, sferocilindrična), kontaktnim sočivima i refraktivnom hirurģijom.

Refrakcione anomalije se sreću u 2–4% dece predškolskog uzrasta. Ako se ne otkriju na vreme i adekvatno ne koriguju, dovede do slabovidosti i razrokosti.

Cilj ovog rada je bio da se analiziraju refrakcione anomalije kod dece predškolskog uzrasta na teritoriji Opštine Kuršumljaja. Pregledano je 141 dete u Očnoj ambulanti Doma zdravlja. Bilo je 76 dečaka i 65 devojčica. Najčešća refrakciona anomalija bila je kratkovidost, zatim astigmatizam, pa dalekovidost. S obzirom na to da je veliki broj dece bez simptoma, rano otkrivanje i adekvatna korekcija predstavljaju glavni cilj u borbi protiv slabovidosti.

Myopia - short-sightedness

In myopia, there is a strong refractive power of the lens and a large length of the eye. Objects located in the distance cannot be seen clearly because the place of creation of a clear image is located in front of the retina (macula). Clinically, myopia is divided into benign (school) and malignant (progressive) myopia.

Hypermetropia - farsightedness

In farsightedness, there is a weak refractive power of the lens and a short length of the eye. The place of creation of a clear image is located behind the retina (macula). There are the following forms of farsightedness: total hypermetropia, latent hypermetropia, and manifest hypermetropia.

Astigmatism

A refractive anomaly is caused by the irregular curvature of the cornea so that the refractive power of the cornea is different in various meridians. There is regular (regularis) and irregular (irregularis) astigmatism. Regular astigmatism can be simple astigmatism (as. simplex), complex (as. compositum), and mixed (as. mixtum).

There are cases where the refraction of both eyes is not the same - anisometropia. One eye can be emmetropic, and the other can have any type of refraction.

Refractive anomalies are treated with corrective glasses (concave, convex, cylindrical, spherocylindrical), contact lenses, and refractive surgery.

Refractive anomalies are found in 2-4% of children of preschool age. If they are not detected in time and not adequately corrected, they lead to low vision and farsightedness.

The aim of this work was to analyze refractive anomalies in children of preschool age in the territory of the Municipality of Kuršumljaja. 141 children were examined in the eye clinic of the Health Center. There were 76 boys and 65 girls. The most common refractive anomaly was nearsightedness, followed by astigmatism and farsightedness. Given the large number of children without symptoms, early detection and adequate correction are the main goals in the fight against low vision.



Dijalizno lečenje akutnog oštećenja bubrega u sklopu kovid-19 infekcije

Dialysis of Acute Kidney Damage Due to COVID-19 Infection

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Apstrakt

Pandemija bolesti uzrokovane novim koronavirusom zbog visoke virulentnosti agensa, velike brzine širenja infekcije i broja slučajeva sa teškom kliničkom slikom, suočila je zdravstvene sisteme širom sveta sa najvećim izazovom u istoriji moderne medicine. Akutno oštećenje bubrega (AOB) je bilo česta komplikacija među obolelima od kovid-19 infekcije, sa procenjenom incidencom od oko 30%, dok je preko 70% bolesnika sa ovom komplikacijom zahtevalo intenzivnu negu i lečenje. Mehanizmi oštećenja bubrega kod ovih bolesnika su kompleksni i uključuju direktno dejstvo virusa na tkivo bubrega, indirektno posledice multiorganskih oštećenja, hipovolemije, inflamacije, superinfekcije, rhabdomiolize i tromboze, kao i posledice primenjenog lečenja (mehanička ventilacija, nefrotoksičnost lekova i hipervolemija).

Preporučene inicijalne terapijske mere u lečenju AOB u sklopu kovid-19 infekcije se ne razlikuju od uobičajenih mera koje se primenjuju u lečenju AOB druge etiologije, naročito u sepsi i višeorganskom popuštanju. Savetuju se održavanje adekvatnog volemijskog statusa, izbegavanje primene nefrotoksičnih agenasa i korekcija doza lekova. Velikom broju bolesnika je pored konzervativnih mera, neophodno i dijalizno lečenje. Načelna je preporuka da se zbog česte hemodinamske nestabilnosti ovih pacijenata i mogućnosti efikasnijeg uklanjanja medijatora inflamacije, kao dijalizni modalitet izbora primenjuju kontinuirani postupci hemodijalize ili prolongirana intermitentna hemodijaliza. Ovi izbori u praksi nose brojne izazove, počevši od dostupnosti modaliteta, tehničke opremljenosti i kapaciteta centra, preko pitanja adekvatnog načina prevencije intradijalizne koagulacije i doziranja lekova tokom postupka, do problema ljudskih resursa. Kao alternativnu opciju, pojedini autori su predložili primenu akutne peritoneumske dijalize, uz praktične preporuke za izvođenje procedure. Intermitentna hemodijaliza je poslednja opcija, naročito nepovoljna za hemodinamski nestabilne bolesnike. Uprkos svim primenjenim merama, pojava AOB u sklopu kovid-19 infekcije bila je povezana sa lošom prognozom i visokom stopom smrtnosti, višom nego kod bolesnika sa AOB bez kovid-19 infekcije, a najvišom kada je bilo neophodno primeniti i dijalizno lečenje.

Abstract

The pandemic of the disease caused by the new coronavirus due to the high virulence of the agent, the high speed of the spread of infection, and the number of cases with a severe clinical picture have faced the health systems around the world with the greatest challenge in the history of modern medicine. Acute kidney injury was a frequent complication among patients with COVID-19, with an estimated incidence of about 30%, while over 70% of patients with this complication required intensive care and treatment. The mechanisms of kidney damage in these patients are complex and include the direct effect of the virus on the kidney tissue, indirect consequences of multiorgan damage, hypovolemia, inflammation, superinfection, rhabdomyolysis, and thrombosis, as well as the consequences of the applied treatment (mechanical ventilation, drug nephrotoxicity, and hypervolemia).

The recommended initial therapeutic measures in the treatment of acute kidney injury in the context of COVID-19 do not differ from the usual measures applied in the treatment of acute kidney injury of other etiologies, especially in sepsis and multi-organ failure. It is recommended to maintain an adequate volemic status, avoid the use of nephrotoxic agents, and adjust the dosage of drugs. In addition to conservative measures, dialysis treatment is also necessary for a large number of patients. The basic recommendation is that due to the frequent hemodynamic instability of these patients and the possibility of more effective removal of inflammatory mediators, continuous hemodialysis procedures or prolonged intermittent hemodialysis should be used as the dialysis modality of choice. These choices in practice bring numerous challenges, starting from the availability of modalities, technical equipment, and capacity of the center, over the question of an adequate way of preventing intra dialysis coagulation and dosing of drugs during the procedure, to the problem of human resources. As an alternative option, some authors have proposed the application of acute peritoneal dialysis with practical recommendations for performing the procedure. Intermittent hemodialysis is the last option, especially unfavorable for hemodynamically unstable patients. Despite all the measures applied, the occurrence of acute kidney injury in the context of COVID-19 was associated with a poor prognosis and a high mortality rate, higher than in patients with acute kidney injury without COVID-19, and the highest when it was necessary to apply dialysis treatment.





Arhetipovi – kako pronaći smisao života

Archetypes - How to Find the Meaning of Life

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Apstrakt

Arhetip je reč grčkog porekla i znači prauzorak, prasliku, prapismo, a naročito – prvi otisak. Arhetip je Jungov pojam koji se odnosi na urođene i univerzalne obrasce ponašanja i mišljenja, a koji predstavljaju osnovne strukture i dinamičke elemente kolektivnog nesvesnog.

Celokupnost i svesnih i nesvesnih zbivanja čine psihi. Psiha se sastoji iz dveju sfera: sfere svesnog i sfere nesvesnog. Obe sfere su suprotne po svojim osobinama, ali dopunjuju se čineći jedinstvo psihe. Sfera svesti je samo delić totalne psihe. Ona je, recimo, kao neko malo ostrvo u moru nesvesnog. Iako je naše Ja samo jedna tačka u centru ovog ostrva, ono dobija centralno značenje u celoj našoj psihi, jer sva naša iskustva, kako spoljašnjeg, tako i unutrašnjeg sveta, moraju da prođu kroz to naše Ja da bi uopšte bila opažena. Međutim, naša svest može da opaža i shvati samo mali broj sadržaja u isto vreme, ostali sadržaji ne nalaze se neposredno u svesti, mada jedan njihov deo može svakog časa da bude dozvan u svest. Ova oblast zaboravljenih ili potisnutih sadržaja pripada individualnom ili ličnom nesvesnom.

U daljem otkrivanju našeg nesvesnog života došlo se do pretpostavke da nesvesni život, osim individualnog nesvesnog, sadrži još jedan dublji i prostraniji spoj nazvan kolektivno nesvesnim. Kolektivno nesvesno dato je pre svakog ličnog iskustva i sadrži opšte, za celo čovečanstvo tipične nasledene forme opažanja i razumevanja, takozvane arhetipove. Oni predstavljaju ogromno duhovno nasleđe ljudskog razvoja. Oni su otisci opšteljudskog iskustva, sticanog u toku hiljada godina u tipičnim, uvek ponavljanim situacijama. Stoga se pojavljuju u svesti pojedinca, kada se ponovi jedna takva prasiituacija u njegovom ličnom životu.

Arhetipovima, tim nesvesnim, filogenetski nasledenim engramima psihe, Jung je pridavao izvanrednu važnost. Smatrajući da dokazano postoje, i to kako u snovima, fantazijama, vizijama, u umetničkom stvaralaštvu (naročito velikih stvaralaca), tako i u sumanutim sadržajima i halucinacijama duševno bolesnih, Jung im je pridavao dominirajući funkcionalni karakter. Osim ovoga, Jung je i smatrao da arhetipovi poseduju veliki energetski naboj.

Prvi put reč *arhetip* Jung je upotrebio tek 1919. godine. Ovaj izraz Jung je uzeo iz Corpus Hermeticum i iz spisa Dioniziusa Areopagite. U potrazi za suštinom arhetipova Jung je morao da dospe do oblasti mitologije, alhemije i istorije religija. On je tako vremenom postao jedan od najčuvenijih istraživača mitova u našem veku.

Od 1946. godine Jung je dopunio svoje ranije učenje o arhetipovima, razlikujući arhetipove za sebe, to jest one koji su potencijalno prisutni u svakoj psihičkoj strukturi, i one koji postaju aktuelni, koji se mogu opažati onda kada stupe

Abstract

Archetype is a word of Greek origin and means prototypical, progenitor, first print, and especially the first impression. Archetype is Jung's concept that refers to innate and universal patterns of behavior and thought, which represent the basic structures and dynamic elements of the collective unconscious.

The totality of both conscious and unconscious events implies the psyche. The psyche consists of two spheres: the sphere of the conscious and the sphere of the unconscious. Both spheres are opposite in their characteristics, but they complement each other creating a unity of the psyche. The sphere of consciousness is only a small part of the total psyche. It is, for example, like a small island in the sea of the unconscious. Although the Self is usually only one point in the center of this island, it acquires a central meaning in our entire psyche, because all our experiences, both of the external and the internal world, must pass through this Self of ours in order to be perceived at all. However, our consciousness can perceive and understand only a small number of contents at the same time, other contents are not directly in consciousness, although one part of them can be called into consciousness at any time. This area of forgotten or repressed content belongs to the individual or personal unconscious.

In the further discovery of our unconscious life, we came to the assumption that the unconscious life, apart from the individual unconscious, contains another, deeper and more extensive compound called the collective unconscious. The collective unconscious is given before any personal experience and contains general, for all humanity, typical inherited forms of perception and understanding, so-called archetypes. They represent a huge spiritual legacy of human development. They are imprints of superhuman experience acquired over thousands of years in typical, ever-repeated situations. Therefore, they appear in the individual's consciousness when one such pre-situation is repeated in his personal life.

Jung attached special importance to archetypes, those unconscious, phylogenetically inherited engrams of the psyche. Considering that they are proven to exist, both in dreams, fantasies, visions, artistic creation (especially of great creators), and in the insane content and hallucinations of the mentally ill, Jung gave them a dominating functional character. Apart from this, Jung believed that archetypes have a great energy charge.

Jung used the word archetypes for the first time only in 1919. Jung took this expression from the Corpus Hermeticum and from the writings of Dionysius the Areopagite. In search of the essence of the archetypes, Jung had to reach the fields of mythology, alchemy, and the history of religions. Over time, he became one of the most famous researchers of myths in our century.

Since 1946, Jung has supplemented his earlier teaching on archetypes, distinguishing archetypes for themselves, that is, those that are potentially present in every psychic structure, and



u oblasti svesti kao arhetipske predstave ili arhetipski proces, stalno pri tome varirajući u svome načinu ispoljavanja, zavisno od opšte konstelacije zbivanja. U stvari, sva životna ispoljavanja, ukoliko su uopšte ljudske i tipične prirode, počivaju na arhetipskoj osnovi, svedeno da li se manifestuju kao biološka, psiho-biološka ili duhovna ispoljavanja.

Arhetipovi su, dakle, nevidljivi koreni svesti. Oni, po Jungovoj koncepciji, u svojoj bipolarnoj strukturi, nose u sebi kako tamnu, tako i svetlu stranu. Otud je i moguće da oni u jednom slučaju, kao kod genijalnih ljudi, postanu nosioci „velikih ideja” koje služe čovečanstvu kao uzor, dok u drugom slučaju, kod duševno bolesnog, postaju njegova kob.

those that become actual, that can be perceived when they enter the realm of consciousness as archetypal representations or archetypal process, constantly varying in its way of manifestation, depending on the general constellation of events. In fact, all life manifestations, if they are at all human and typical in nature, rest on an archetypal basis, regardless of whether they manifest as biological, psycho-biological, or spiritual manifestations.

Therefore, archetypes are the invisible roots of consciousness. According to Jung's conception, in their bipolar structure, they carry both a dark and a light side. Hence, it is possible that in one case, as in the case of geniuses, they become the bearers of "great ideas" that serve humanity as a role model, while in another case, in the case of a mentally ill person, they become his bane.

Neinfektivne plućne komplikacije mijelodisplastičnih sindroma i hroničnih mijeloproliferativnih bolesti

Non-infectious Pulmonary Complications of Myelodysplastic Syndromes and Chronic Myeloproliferative Diseases

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Apstrakt

Plućne komplikacije u hematološkim malignim bolestima su veoma česte i uglavnom su infektivnog porekla. Neinfektivne plućne komplikacije mijelodisplastičnih sindroma i hroničnih mijeloproliferativnih bolesti takođe nisu retke, ali ostaju manje poznate pulmolozima, koji se mogu suočiti sa različitim kliničkim slikama koje odgovaraju različitim patofiziološkim uzrocima. Malobrojni podaci u literaturi odnose se samo na izolovane slučajeve ili male serije.

Neinfektivne plućne komplikacije mijelodisplastičnih sindroma i hroničnih mijeloproliferativnih poremećaja mogu se klasifikovati u nekoliko kliničkih entiteta: plućne parenhimske ili medijastinalne mase, plućna fibroza ili difuzna infiltrativna pneumonija, autoimune manifestacije, Sweet sindrom, hipereozinofilni sindrom, plućna alveolarna proteinoza, organizujuća pneumonija, pleuralna efuzija i plućna arterijska hipertenzija.

Dijagnoza se postavlja na osnovu histologije, a lečenje ovih komplikacija zavisi od osnovne patologije. Mijelodisplastični sindromi i mijeloproliferativni poremećaji su entiteti koji se sve bolje karakterišu i razumeju. Bolje poznavanje patofizioloških mehanizama uključenih u ove komplikacije trebalo bi da poboljša njihovu dijagnozu i njihovo lečenje, koje i dalje ostaje složeno.

Praktični deo rada biće prezentovan kroz prikaz slučaja iz naše kliničke prakse.

Abstract

Pulmonary complications in hematological malignancies are very common and are mostly of infectious origin. Non-infectious pulmonary complications of myelodysplastic syndromes and chronic myeloproliferative diseases are also not rare but remain less known to pulmonologists, who may face different clinical pictures corresponding to different pathophysiological causes. The few data in the literature refer only to isolated cases or small series.

Noninfectious pulmonary complications of myelodysplastic syndromes and chronic myeloproliferative disorders can be classified into several clinical entities: pulmonary parenchymal or mediastinal masses, pulmonary fibrosis or diffuse infiltrative pneumonia, autoimmune manifestations, Sweet syndrome, hypereosinophilic syndrome, pulmonary alveolar proteinosis, organizing pneumonia, pleural effusion, and pulmonary arterial hypertension.

The diagnosis is based on histology, and the treatment of these complications depends on the underlying pathology. Myelodysplastic syndromes and myeloproliferative disorders are entities that are increasingly characterized and understood. A better knowledge of the pathophysiological mechanisms involved in these complications should improve their diagnosis and their treatment, which still remains complex.

The practical part of the work will be presented through the presentation of a case from our clinical practice.



Kritične laboratorijske vrednosti kod kardioloških i reumatoloških bolesnika

Critical Laboratory Values in Cardiology and Rheumatology Patients

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Apstrakt

Kritične laboratorijske vrednosti su alarmantne vrednosti i predstavljaju laboratorijsku vrednost opasnu po život pacijenta, ukoliko se blagovremeno ne preduzmu odgovarajuće mere lečenja. Ovaj pojam postoji još od pre više od 40 godina, a originalnu definiciju uveo je Lundberg.

Kritične vrednosti mogu biti nenormalno niski ili visoki rezultati, a zahtevaju neodložno obaveštavanje kliničkog lekara i hitnu intervenciju. Nakon potvrde o dodatnim merenjima jednog istog uzorka, dakle uzorka uzetog u isto vreme i pod istim okolnostima, neophodno je da laboratorijsko osoblje obavesti ordinirajućeg lekara o odgovarajućim parametrima, a nakon verifikacije dobijenog kritičnog rezultata od strane kompetentne osobe (kliničkog biohemičara), potrebno je prodiskutovati o dobijenom testu sa lekarom, tj. izvršiti kliničku ekspertizu dobijenog nalaza. Laboratorijske kritične vrednosti, kao i njihov uticaj na dijagnostiku, terapiju, praćenje efekta terapije i prognozu bolesti, predstavljaju značajnu kariku u lancu kako bi se proces brige o pacijentu ispoštovao od samog početka do kraja lečenja, a sve u korist pacijenta. Neuspeh adekvatne komunikacije između laboratorije i klinike je potencijalni uzrok štetnih posledica po zdravlje pacijenta.

Izveštaji o kritičnim rezultatima, tj. o alarmantnim vrednostima su uključeni u listu konsenzusa indikatora kvaliteta Međunarodne federacije za kliničku hemiju i laboratorijsku medicinu i Radne grupe za laboratorijske greške i bezbednost pacijenata (IFCC LEPS), i oni u okviru indikatora kvaliteta imaju visok prioritet za evaluaciju i monitoring grešaka, odnosno indikatora kvaliteta.

Svaki nalaz ima svoje boldovane vrednosti koje iskaču iz referentnog opsega, ali nije svaka ova vrednost alarmantna. Ukoliko klinički biohemičar proceni da rezultat jeste alarmantan, u obavezi je da obavesti lekara ili pacijenta lično sa preporukom kuda se dalje javiti. Evidencija o kritičnim vrednostima, tj. alarmantnim vrednostima postoji u SLIS-u ili pisanom obliku za svaki parametar i svakog pacijenta sa takvim vrednostima prema preporukama GLP-a.

Abstract

Critical laboratory values are alarming values and represent a laboratory value dangerous to the patient's life if appropriate treatment measures are not taken in time. This term has existed since more than 40 years ago, and the original definition was introduced by Lundberg.

Critical values can be abnormally low or high results, and require immediate notification of the clinician and immediate intervention. After confirmation of additional measurements of the same sample, i.e. a sample taken at the same time and under the same circumstances, it is necessary for the laboratory staff to inform the attending physician about the appropriate parameters, and after verification of the obtained critical result by a competent person (clinical biochemist), it is necessary to discuss the obtained test with the doctor, i.e. perform clinical expertise of the obtained findings. Laboratory critical values, as well as their impact on diagnostics, therapy, monitoring the effect of therapy and disease prognosis, represent an important link in the chain in order to follow the process of patient care from the very beginning to the end of treatment, all in favor of the patient's well-being. Failure of adequate communication between the laboratory and the clinic is a potential cause of adverse consequences for the patient's health.

Reports on critical results, i.e. on alarming values are included in the consensus list of quality indicators of the International Federation for Clinical Chemistry and Laboratory Medicine and the Working Group on Laboratory Errors and Patient Safety (IFCC LEPS), and they have a high priority within the quality indicators for the evaluation and monitoring of errors, i.e. quality indicators.

Each finding has its own bold values that jump out of the reference range, but not every value is alarming. If the clinical biochemist estimates that the result is alarming, he is obliged to inform the doctor or the patient personally with a recommendation on where to contact him next. Records of critical values, i.e. alarm values, exist in SLIS or in written form for each parameter and each patient with such values according to GLP recommendations.



Etička razmataranja u resuscitaciji – evropske preporuke

Ethical Considerations in Resuscitation - European Recommendations

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Apstrakt

Resuscitacioni pokušaji nemaju za cilj produženje života po svaku cenu, jer mogu samo produžiti proces umiranja. Idealno bi bilo unapred doneti odluku o tome da li je ispravno započinjati resuscitaciju, u okviru koncepta unapred planiranog lečenja.

Četiri osnovna principa medicinske etike su:

1. Dobrobit – ovaj princip najčešće znači da treba pokušati sa kardiopulmonalnom resuscitacijom (KPR), ali ako rizici prevazilaze moguću korisnost, može značiti da resuscitaciju ne treba započeti.
2. Neškodljivost – znači ne naštetiti. KPR ne treba nastaviti kod pacijenata kod kojih neće uspeti, kod kojih povoljan ishod nije verovatan, a postoji jasan rizik od povređivanja.
3. Pravednost – podrazumeva da ako postoje uslovi da se KPR može primeniti, onda bi trebalo da bude dostupna svima, bez diskriminacije na osnovu godina ili nemoći.
4. Autonomnost – dobro informisani pacijenti mogu samostalno odlučivati, umesto da to čini neko umesto njih.

Unapred donete odluke o odbijanju lečenja uvedene su u mnogim zemljama i naglašavaju značaj autonomnosti pacijenta. Resuscitacija se ne sme pokušavati, ukoliko je to u suprotnosti sa zabeleženim odlukama odrasle osobe sa očuvanom moći rasuđivanja koja je svesna posledica u vreme donošenja odluke. Važno je osigurati validnost te odluke, kao i da okolnosti u kojima se ta odluka sprovedi budu predviđene ili definisane u trenutku njenog donošenja. U slučajevima iznenadnog vanbolničkog srčanog zastoja prisutni obično ne poznaju situaciju pacijenta i njegove želje. Ako je odluka zabeležena, može biti nedostupna. KPR treba započeti i ostale podatke pribaviti kad bude moguće. Pacijenti imaju pravo odbiti lečenje i nemaju pravo da lečenje zahtevaju, ne može se očekivati da lekar leči pacijente i onda kada je to u suprotnosti sa kliničkom procenom. Mnogi pokušaji resuscitacije završavaju se neuspešno i potrebno je doneti odluku o prekidu KPR. Ova se odluka može doneti kada postane jasno da nastavak KPR neće uroditi plodom. Faktori koji utiču na odluku podrazumevaju istoriju bolesti pacijenta, ritam srčanog zastoja, odgovor ili izostanak odgovora na inicijalne resuscitacione pokušaje i trajanje pokušaja. Ponekad tokom resuscitacije informacije postaju dostupne i mogu ukazati na to da dalja KPR neće biti uspešna. KPR treba nastaviti dok se održava šokabilni ritam ili reverzibilni uzrok srčanog zastoja. Opšte je prihvaćeno da ako se asistolija održava više od 20 minuta u odsustvu reverzibilnog uzroka sa svim preduzetim merama napredne životne podrške, neće odgovoriti na dalju primenu KPR i razumno je prekinuti resuscitaciju.

Abstract

Resuscitation attempts are not aimed at prolonging life at all costs, as they can only prolong the dying process. It would be ideal to decide in advance whether it is right to start resuscitation, within the concept of pre-planned treatment.

The four basic principles of medical ethics are:

1. Well-being – This principle usually means that cardiopulmonary resuscitation (CPR) should be attempted, but if the risks outweigh the possible benefits, it may mean that resuscitation should not be started.
2. Harmlessness - means not to damage. CPR should not be continued in patients in whom it will fail, in whom a favorable outcome is unlikely, and in whom there is a clear risk of injury.
3. Fairness - implies that if there are conditions for CPR to be applied, then it should be available to everyone, without discrimination based on age or disability.
4. Autonomy - Well-informed patients can make their own decisions instead of having someone else do it for them.

Advance decisions on refusal of treatment have been introduced in many countries and emphasize the importance of patient autonomy. Resuscitation should not be attempted if it conflicts with the recorded decisions of an adult with preserved judgment who is aware of the consequences at the time of the decision. It is important to ensure the validity of that decision, as well as that the circumstances in which that decision is implemented are foreseen or defined at the time of its adoption. In cases of sudden out-of-hospital cardiac arrest, even those present are usually unaware of the patient's situation and wishes. If the decision is recorded, it may be unavailable. CPR should be started and other data obtained when possible. Patients have the right to refuse treatment and do not have the right to demand treatment, a doctor cannot be expected to treat patients even when it contradicts clinical judgment. Many attempts at resuscitation end in failure and a decision must be made to stop CPR. This decision can be made when it becomes clear that the continuation of CPR will not bear fruit. Factors influencing the decision include the patient's medical history, rhythm of cardiac arrest, response or lack of response to initial resuscitation attempts, and duration of attempts. Sometimes during resuscitation information becomes available and may indicate that further CPR will not be successful. CPR should be continued while a shockable rhythm or reversible cause of cardiac arrest is maintained. It is generally accepted that if asystole persists for more than 20 minutes in the absence of a reversible cause with all advanced life support measures in place, it will not respond to further CPR and it is reasonable to discontinue resuscitation.





Dekubitus Decubitus

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Apstrakt

Dekubitus ili rana od ležanja je stanje koje nastaje usled dužeg i ponovljenog izlaganja pojedinih delova tela silama pritiska, smicanja i trenja. Jedna je od najčešćih komplikacija nepokretnosti.

Pritisak na određeni deo tela definiše se kao spoljni faktor i na njega možemo delovati u najvećoj meri, ukloniti ga ili umanjiti njegovo dejstvo. U egzogene faktore ubraja se i vlažnost kože, jedan od najznačajnijih faktora rizika. Dugotrajno i produženo prisustvo vlažnosti dovodi do promena u strukturi kože, a time i povećanog rizika za nastanak rane. Postoje i endogeni faktori: neuhranjenost, malokrvnost, loša ishrana, dijabetes, otoci po telu, kao i mnoge druge pridružene bolesti. Na ove nabrojane faktore može se uticati delimično.

Mesta na kojima se najčešće javlja dekubitalna rana su takozvana predilekciona mesta: slabinski deo karlice, sedalna kost, zglobovi kuka, čukljevi, kolena, laktovi, kao i područja na kojima je slabije razvijeno potkožno tkivo.

Dekubitalne rane prolaze kroz određene faze, koje su jasno uočljive, što pacijentu i ukućanima daje šansu da blagovremeno reaguju, potraže profesionalnu pomoć, kao i da tretiraju dekubitalnu ranu u nastajanju i spreče dodatne komplikacije.

U zavisnosti od dubine oštećenja, dekubitusi se dele u pet faza.

1. I faza – crvenilo kože, lokalna temperatura, otok;
2. II faza – pored crvenila, lokalne temperature i otoka, javlja se i plik sa oštećenjem gornjeg sloja kože;
3. III faza – već prisutno oštećenje gornjeg sloja kože se širi na dublje slojeve;
4. IV faza – oštećenje prodire u dublje slojeve kože, a može zahvatiti i mišiće;
5. V faza – tkivo između kože i kostiju je potpuno uništeno, a oštećenje može zahvatiti i kost.

Dekubitalna rana prvog i drugog stepena (kada je zahvaćena samo koža) može se lečiti bez operacije, u kućnim uslovima. Ukoliko je rana trećeg ili četvrtog stepena, ako je velika i ne može da zaraste nekoliko nedelja čak ni uz stručnu pomoć, najbolji lek je hirurška intervencija.

Pojava dekubitalnih rana zahteva adekvatno reagovanje već u prvoj fazi, kako bi se izbegle dalje komplikacije. Na ovaj stadijum se može uticati maksimalnim rasterećenjem od pritiska, održavanjem higijene, utrljavanjem hranljivih krema ili primenom savremenih obloga. Ranu treba tretirati sredstvom za dezinfekciju ili antiseptičnim sprejevima koji deluju protiv bakterija, gljivica i virusa i previti sterilnom gazom ili nekom drugom oblogom za rane.

U okviru prevencije se preporučuje pregled kože svakodnevno kako bi se na vreme uočila promena na koži, promena položaja bolesnika svaka dva sata, održavanje kože čistom i suvom u

Abstract

A decubitus or bedsore is a condition that occurs due to prolonged and repeated exposure of certain parts of the body to the forces of pressure, shear, and friction. It is one of the most common complications of immobility.

Pressure on a certain part of the body is defined as an external factor and we can act on it to the greatest extent, remove or reduce its effect. Exogenous factors include skin moisture, one of the most important risk factors. Long-term and prolonged presence of humidity leads to changes in the skin structure and thus an increased risk of wound formation. There are also endogenous factors: malnutrition, anemia, poor nutrition, diabetes, swelling of the body, as well as many other associated diseases. These listed factors can be partially influenced.

The places where a decubitus wound most often occurs are the so-called predilection places: the lumbar part of the pelvis, saddle bone, hip joint, bunions, knees, and elbows, as well as areas where the subcutaneous tissue is less developed.

Decubitus wounds go through certain stages, that are clearly visible, which gives the patient and family members a chance to react in time, seek professional help, as well as to treat the decubitus wound in the process, and prevent additional complications.

Depending on the depth of damage, pressure ulcers are divided into five stages.

1. Stage I - characterized by redness of the skin, local temperature, swelling
2. Stage II - in addition to redness, local temperature, and swelling, a blister appears with damage to the upper layer of the skin
3. Stage III – already present damage to the upper layer of the skin spreads to deeper layers
4. Stage IV - the damage penetrates into the deeper layers of the skin and can affect the muscles as well
5. Stage V - the tissue between the skin and the bones is completely destroyed, and the damage can affect the bone as well.

A decubitus wound of the first and second degree (when only the skin is affected) can be treated without surgery, at home. If the wound is of the third or fourth degree, if it is large and cannot heal for several weeks even with professional help, the best remedy is surgical intervention.

The appearance of decubitus wounds requires an adequate response already in the first phase, in order to avoid further complications. This stage can be affected by maximum relief from pressure, maintaining hygiene, rubbing in nourishing creams, or using modern dressings.

The wound should be treated with disinfectant or antiseptic sprays that work against bacteria, fungi, and viruses and bandaged with sterile gauze or another wound dressing.



svakom momentu (neophodno je oprati pacijenta neutralnim sredstvima svakog dana, kao i masirati, utrljavati hranljive kreme), nabavka antidekubitalnog dušeka, koji obezbeđuje konstantnu masažu tela i menjanje raspodele pritiska na telo pacijenta, redovna i pravilna ishrana, uz unos dovoljne količine belančevina, vitamina, kao i cinka, gvožđa i bakra, jer to pospešuje zarastanje rana.

Dekubitalna rana često može postati hronična rana. Hronične rane su sve one koje ne zarastaju očekivanom brzinom, već se zadržavaju duže vreme (obično duže od 6 nedelja), pričinjavajući pacijentu neprijatnosti i bolove. Mnoge hronične dekubitalne rane imaju tendenciju brzog pogoršavanja, ukoliko ne dobijaju pravilan tretman i negu.

As part of prevention, it is recommended to examine the skin daily in order to detect changes in the skin in time, to change the position of the patient every two hours, to keep the skin clean and dry at all times (it is necessary to wash the patient with neutral agents every day, as well as massage, rub in nourishing creams), the purchase of an anti-decubitus mattress, which provides constant body massage and changing the distribution of pressure on the patient's body, regular and proper nutrition, with the intake of sufficient amounts of protein, vitamins, as well as zinc, iron, and copper, because this promotes wound healing.

A decubitus wound can often become a chronic wound. Chronic wounds are all those that do not heal at the expected speed, but persist for a long time (usually longer than 6 weeks), causing discomfort and pain to the patient. Many chronic decubitus wounds tend to worsen rapidly if they do not receive proper treatment and care.



Poremećaji spavanja u trudnoći

Sleep Disorders in Pregnancy

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Apstrakt

Uvod: Spavanje je prirodno, periodično, fiziološki reverzibilno stanje umanjene budnosti koje karakterišu smanjena percepcija i reagovanje na spoljašnje draži, a koje je praćeno kompleksnim bihevijoralnim i biološkim procesima. Anatomske, fiziološke, hormonske i psihološke promene koje se odigravaju tokom trudnoće imaju veliki uticaj na spavanje. Poremećaji spavanja u toku trudnoće su česti. Oni mogu u manjoj ili većoj meri uticati na zdravlje majke i ploda.

Cilj: Utvrditi koji su poremećaji spavanja u trudnoći od najvećeg kliničkog značaja, kao i načine njihove prevencije i lečenja.

Metoda rada: Analizom savremene naučne literature i novih naučnih studija utvrditi mehanizme nastanka poremećaja spavanja, njihove efekte na zdravlje majke i ploda, kao i načine njihove prevencije i lečenja.

Rezultati: Poremećaji spavanja su česti u trudnoći. Prema podacima dosadašnjih ispitivanja 70–80% trudnica ima neki oblik poremećaja spavanja. U odnosu na efekte koje imaju po maternalno i fetalno zdravlje nisu svi podjednako značajni. Rizik od nastanka poremećaja spavanja se povećava tokom trudnoće. Najčešći i najznačajniji poremećaji spavanja u trudnoći su prekid disanja u toku spavanja, sindrom nemirnih nogu i insomnija. Ovi poremećaji su usko povezani sa gestacijskom arterijskom hipertenzijom, gestacijskom šećernom bolesti, preeklamsijom i postpartalnom depresijom. Prekidi disanja u toku spavanja majke mogu imati negativan efekat na rast i razvoj ploda.

Zaključak: Rano otkrivanje i adekvatno lečenje poremećaja spavanja u toku trudnoće značajno smanjuje rizik od ozbiljnih poremećaja zdravlja majke i ploda.

Abstract

Introduction: Sleep is a natural, periodic, physiologically reversible state of reduced alertness characterized by reduced perception and response to external stimuli, which is accompanied by complex behavioral and biological processes. Anatomical, physiological, hormonal, and psychological changes that occur during pregnancy have a great impact on sleep. Sleep disorders during pregnancy are common. They can affect the health of the mother and fetus to a greater or lesser extent.

Aims: To determine which sleep disorders in pregnancy are of the greatest clinical importance, as well as the ways of their prevention and treatment.

Methods: By analyzing modern scientific literature and new scientific studies, determine the mechanisms of sleep disorders, their effects on the health of the mother and the fetus, as well as ways of their prevention and treatment.

Results: Sleep disorders are common in pregnancy. According to the data from previous studies, 70–80% of pregnant women have some form of sleep disorder. In relation to the effects they have on maternal and fetal health, not all of them are equally significant. The risk of sleep disorders increases during pregnancy. The most common and significant sleep disorders during pregnancy are sleep apnea, restless legs syndrome, and insomnia. These disorders are closely related to gestational arterial hypertension, gestational diabetes, preeclampsia, and postpartum depression. Breathing interruptions during the mother's sleep can have a negative effect on the growth and development of the fetus.

Conclusion: Early detection and adequate treatment of sleep disorders during pregnancy significantly reduce the risk of serious maternal and fetal health disorders.





Kovid-19 infekcija kod novorođenčeta

COVID 19 Infection in Newborn Infants

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Apstrakt

Sa početka pandemije korona-virusom primarno je inficirana adultna populacija, sa niskom incidencom kod dece. U ovom radu prezentujemo slučaj ženskog novorođenčeta, rođenog u terminu u 38. nedelji gestacije vaginalnim porođajem, sa SARS-CoV-2 infekcijom. Prva 3 sata života novorođenče je bilo bez tegoba, da bi došlo do naglog pogoršanja opšteg stanja praćenog hipoksemijom, visokom temperaturom i nespecifičnim znacima akutnog respiratornog distresa. U drugom danu je u terapiju uključen kiseonik, a od trećeg dana je novorođenče intubirano. Radiografija pluća napredovala je od jednostranih zona konsolidacije do obostrane slike „mlečnog stakla”. Analize krvi ukazivale su na porast vrednosti C reaktivnog proteina, prokalcitonina, D-dimera, feritina i pro BNP-a. U terapiju su uključeni antibiotici, niskomolekularni heparin (prokalcitonina, D-dimera, feritina i pro BNP-a), niskomolekularni heparin (clexane) i kortikosteroid (dexason). Krajem četvrtog dana hospitalizacije klinički nalaz se značajno pogoršao tahipneom sa dispneom uz cijanozu i tahikardiju, što je rezultiralo povećanom potrebom za kiseonikom (95% na pritisak kontrolisanoj ventilaciji) bez značajnijeg oporavka, uz značajan skok IL6. Izmena opšteg stanja rezultirala je razvojem plućne hipertenzije u sklopu kovid-19, izazvanom distres sindromom, koja je medikamentozno lečena. Korigovana je anti-biotska terapija, uz dodatak tocilizumaba.

Zaključak: Prikazali smo, prema našim saznanjima, prvo obolelo novorođenče sa SARS-CoV-2 infekcijom, razvijenom u trećem satu života, kao i naše iskustvo u lečenju. Cilj je bolje razumevanje mehanizma osnovne bolesti, kao i izrada jedinstvenih smernica.

Abstract

Since the beginning of the Coronavirus pandemic, the adult population has been primarily infected, with a low incidence in children. In this paper, we present the case of a female newborn, born at term at 38 weeks of gestation by vaginal delivery, with SARS-CoV-2 infection. For the first 3 hours of life, the newborn was uncomplicated, before a sudden worsening of the general condition followed by hypoxemia, high temperature, and non-specific signs of acute respiratory distress. On the second day, oxygen was included in the therapy, and on the third day the newborn was intubated. Radiography of the lungs progressed from one-sided zones of consolidation to a bilateral “ground-glass” image. Blood analyses indicated an increase in the values of C reactive protein, procalcitonin, D-dimer, ferritin, and pro-BNP. Antibiotics, and low-molecular-weight heparin (procalcitonin, D-dimer, ferritin, and pro-BNP) were included in the therapy. Antibiotics, low-molecular-weight heparin (Clexane), and corticosteroid (Dexason) were included in the therapy. At the end of the fourth day of hospitalization, the clinical findings significantly worsened with tachypnea dyspnea with cyanosis and tachycardia which resulted in an increased need for oxygen (95% on pressure-controlled ventilation) without significant recovery with a significant jump in IL6. The change in the general condition resulted in the development of pulmonary hypertension as part of the COVID-19-induced distress syndrome which was medically treated. The antibiotic was corrected therapy, with the addition of Tocilizumab.

Conclusion: We presented, to our knowledge, the first sick newborn with SARS-CoV-2 infection developed in the third hour of life, as well as our experience in treatment. The objective is a better understanding of the underlying disease mechanism, as well as the development of unique guidelines.





Problem uretritisa kod muškaraca u svakodnevnoj kliničkoj praksi

The Problem of Urethritis in Men in Daily Clinical Practice

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Apstrakt

Urethritis predstavlja klinički sindrom koji karakteriše pojava mukopurulentnog ili purulentnog iscedka iz uretralnog kanala, usled povećanog broja polimorfonuklearnih leukocita u prednjem delu uretre, a koji može biti praćen dizuričnim tegobama. Prema toku oboljenje može biti akutno ili perzistentno, a deli se na dve grupe: na gonoroični urethritis koji izaziva *Nisseria gonorrhoeae* i na negonoroični urethritis koji je najčešće izazvan polno prenosivim patogenima (*Chlamydia trachomatis*, *Ureaplasma urealyticum*, *Mycoplasma hominis*, *Mycoplasma genitalium*, *Trichomonas vaginalis*, *Herpes simplex virus*) ili, pak, urinarnom infekcijom, adenovirusima i neinfektivnim faktorima (iritacija od sredstava za intimnu negu, povrede tokom seksualnog odnosa ili jatrogene traume). Esencijalni uretritisi nastaju usled direktnog delovanja štetnog agensa na sluzokožu uretre, dok su simptomatski uretritisi oni kod kojih je inflamacija i sekrecija iz uretre samo jedan od znakova nekog drugog oboljenja. Gonoroični urethritis se javlja nakon prosečne inkubacije od 3 do 7 dana i praćen je pojavom obilnog iscedka žućkastozelenkaste boje kome prethodi osećaj žarenja pri mokrenju, a nekad mogu biti prisutne i bolne erekcije. Ako se ne leči posle dve nedelje može da nastupi upala zadnjeg dela uretre sa učestalim nagonom za mokrenjem, bolom u anorektalnom području i prisustvom krvi na kraju mokrenja. Hlamidijaza je često asimptomatska, a ako su tegobe prisutne, javljaju se u vidu svraba i peckanja u mokraćnom kanalu i pojave mukopurulentnog iscedka beličaste boje. Nelečena infekcija može dovesti do epididimitisa, orhitisa, prostatitisa i infertiliteta. Trihomonijaza kod muškaraca je najčešće asimptomatska, a ukoliko postoje simptomi ili znaci infekcije, to su obično dizurične tegobe i prolazni penušavi iscedak iz uretre, a vlaženje i blag svrab na meatusu uretre mogu biti prisutni u jutarnjim satima. U dijagnostici uretritisa najveću osetljivost (preko 95%) imaju savremeni testovi bazirani na amplifikaciji nukleinskih kiselina, a materijal za laboratorijsku analizu se uzima iz uretralnog brisa, ejakulata ili urina. Antibiotička terapija i mere prevencije (edukacija, bezbedne seksualne prakse) su osnova u borbi protiv bakterijskih uretritisa, ali sve učestalija antimikrobna rezistencija za posledicu ima neuspešni terapijski ishod i posledica po reproduktivno zdravlje. Cilj ovog predavanja je da detaljnije upoznamo učesnike sa klasifikacijom, etiologijom, simptomima i kliničkom slikom uretritisa kod muškaraca, savremenom dijagnostikom, terapijom i komplikacijama uretritisa.

Abstract

Urethritis is a clinical syndrome characterized by the appearance of mucopurulent or purulent discharge from the urethral canal due to an increased number of polymorphonuclear leukocytes in the anterior part of the urethra, which may be accompanied by discomfort during the urination. According to the course, the disease can be acute or persistent, and it is divided into two groups: gonorrheal urethritis caused by *Nisseria gonorrhoeae* and non-gonorrhoeal urethritis, which is most often caused by sexually transmitted pathogens (*Chlamydia trachomatis*, *Ureaplasma urealyticum*, *Mycoplasma hominis*, *Mycoplasma genitalium*, *Trichomonas vaginalis*, *Herpes simplex virus*) or urinary infection, adenoviruses and non-infectious factors (irritation from intimate care products, injuries during sexual intercourse or iatrogenic trauma). Essential urethritis is caused by the direct action of a harmful agent on the mucous membrane of the urethra, while symptomatic urethritis is one in which inflammation and secretion from the urethra is only one of signs of another disease. Gonorrheal urethritis occurs after an average incubation period of 3 to 7 days and is followed by the appearance of abundant discharge of a yellowish-green color, which is preceded by a burning sensation during urination, and sometimes painful erections may also be present. If it is not treated after two weeks, inflammation of the back part of the urethra can occur with a frequent urge to urinate, pain in the anorectal area, and the presence of blood at the end of urination. *Chlamydia* is often asymptomatic, and if symptoms are present, they appear in the form of itching and burning in the urinary canal and the appearance of whitish mucopurulent discharge. Untreated infection can lead to epididymitis, orchitis, prostatitis, and infertility. *Trichomoniasis* in men is usually asymptomatic, and if there are symptoms or signs of infection, they are usually discomfort and transient foamy discharge from the urethra, and wetting and mild itching at the urethral meatus can be present in the morning hours. In the diagnosis of urethritis, modern tests based on nucleic acid amplification have the highest sensitivity (over 95%), and the material for laboratory analysis is taken from urethral smear, ejaculate, or urine. Antibiotic therapy and prevention measures (education, safe sexual practices) are the basis of the fight against bacterial urethritis, but increasingly frequent antimicrobial resistance results in an unsuccessful therapeutic outcome and consequences for reproductive health. The aim of this lecture is to familiarize the participants with the classification, etiology, symptoms, and clinical picture of urethritis in men, modern diagnostics, therapy, and complications of urethritis.





Zdravstvena ispravnost vode za piće u domaćinstvima koja imaju sopstvene bunare u opštini Požarevac za period 2018–2022

Health Property of Drinking Water in Households That Have Their Own Wells in the Municipality of Požarevac for the Period 2018–2022

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Apstrakt

Uvod: Zdravstveno bezbedna voda za piće predstavlja osnovu zdravog života i jedan je od prioriteta primarne zdravstvene zaštite. Bezbednost podrazumeva mikrobiološki, fizičko-hemijski i radiološki ispravnu vodu, po Pravilniku o higijenskoj ispravnosti vode za piće, *Službeni list SRJ* br. 42/98. i 44/99. i *Sl. glasnik RS* 28/2019, i dovoljne količine vode i njenu kontinuiranu isporuku. Poslednjih godina u poljoprivrednim krajevima i u naseljima bez kanalizacije imamo ubrzano zagađivanje podzemnih voda. Ova zagađenja mogu ozbiljno oštetiti zdravlje ljudi. Do zagađenja podzemnih voda dolazi zbog: prekomerne upotrebe veštačkih i prirodnih đubriva, izgradnje propusnih septičkih jama, pretvaranja starih bunara u septičke jame, zbog nehigijenskog odlaganja smeća i nehigijenskog ispuštanja otpadnih voda i zbog prekomerne upotrebe pesticida. Načini vodosnabdevanja stanovništva su: centralno vodovodsko snabdevanje, gradski i seoski vodovodi, snabdevanje iz lokalnih vodnih objekata-javne česme i individualno snabdevanje iz sopstvenih bunara u seoskim naseljima koja nisu priključena na gradski ili seoski vodovodi. Kvalitet vode za piće u individualnim bunarima u seoskim naseljima po zakonu ne podleže nikakvoj zakonskoj kontroli.

Cilj rada je da detaljno prikaže i analizira kvalitet vode za piće u individualnim bunarima u seoskim naseljima na području opštine Požarevac, da se uoče najčešći razlozi neispravnosti vode za piće u individualnim bunarima u seoskim naseljima i da se obavesti stanovništvo o kvalitetu vode koju pije.

Metoda rada: U 17 seoskih naselja na teritoriji grada Požarevca, koja nemaju centralno vodosnabdevanje, za period 2018–2022. uzorkovano je i pregledano u laboratorijama Zavoda za javno zdravlje Požarevac 1700 uzoraka vode za piće, od toga je neispravno 1247 uzoraka (73,35%). Radila se osnovna analiza vode.

Rezultati ispitivanja: U većini naselja voda je higijenski neispravna u velikom procentu. Najčešći uzrok neispravnosti je povišena vrednost nitrata i mikrobiološka neispravnost zbog prisustva bakterija fekalnog porekla.

Predlog mera: Dugoročno obezbeđenje dovoljnih količina zdravstveno ispravne vode za piće svim stanovnicima je centralno, vodovodsko snabdevanje.

Abstract

Introduction: Health-safe drinking water is the basis of a healthy life and is one of the priorities of primary health care. Safety means microbiologically, physiochemically, and radiologically correct water, according to the Rulebook on the Hygienic Correctness of Drinking Water Official Gazette of the FRY no. 42/98 and 44/99 and Sl. RS Gazette 28/2019 and sufficient quantities of water and its continuous delivery. In recent years, in agricultural areas and in settlements without sewerage, we have accelerated groundwater pollution. These pollutions can seriously damage human health. Groundwater pollution occurs due to: excessive use of artificial and natural fertilizers, construction of leaky septic tanks, conversion of old wells into septic tanks, unsanitary disposal of garbage and unsanitary discharge of wastewater, and excessive use of pesticides. Ways of water supply to the population are central water supply city and village water supply systems, supply from local water facilities - public fountains, and individual supply from own wells in rural settlements that are not connected to city or village water supply systems. By law, the quality of drinking water in individual wells in rural settlements is not subject to any legal control.

The aim of the paper is to show in detail and analyze the quality of drinking water in individual wells in rural settlements in the Požarevac municipality, to identify the most common reasons for the malfunctioning of drinking water in individual wells in rural settlements, and to inform the population what kind of water they drink.

Methods: In 17 rural settlements on the territory of the city of Požarevac, which do not have a central water supply, for the period 2018–2022. 1,700 samples of drinking water were sampled and examined in the laboratories of the Požarevac Institute of Public Health, of which 1,247 samples (73.35%) were defective. A basic water analysis was done.

Results: In most settlements, the water is hygienically incorrect in a large percentage. The most common cause of failure is due to elevated nitrate values and microbiological failure due to the presence of bacteria of fecal origin.

Proposed measures: The long-term provision of sufficient amounts of healthy drinking water for all residents is a central water supply.





Arthrogryposis multiplex congenita

Arthrogryposis Multiplex Congenita

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Apstrakt

Artrgripozou karakterišu urođene multiple kontrakture zglobova i slabost mišića. Mišići ekstremiteta bivaju zamenjeni masnim i vezivnim tkivom. Klasičan oblik artrgripoze se zato u novijoj literaturi obično zove amiooplazija. Ako dođe do izmene respiratornih mišića, može doći i do smrtnog ishoda, mada ređe. Bitno je naglasiti da stanje nije progresivno. Prevalenca je 1:3000. Prema nekim podacima prevalenca u Evropi je 1:12000.

Etiologija: Zglobovi se razvijaju u drugom mesecu trudnoće, pa upravo u ovom periodu može se tražiti uzrok nastanka ovog stanja. Kao razlozi navode se: infekcija uz povišenu telesnu temperaturu, traume, korišćenje droga, ali i insekticidi kojih ima u sprejevima protiv insekata, u šamponima protiv vaši i omasovljena upotreba u poljoprivredi doskora.

Klinička slika: Deformiteti su češći na distalnim zglobovima, na šakama i stopalima. Zglobovi su rigidni, sa tankim potkožnim tkivom i odsustvom kožnih nabora. Pored brojnih kontraktura, česta su i iščašenja (obično kukova i kolena), nekad odsustvo patele. Mišići su atrofični, nekada nedostaju cele mišićne grupe. Tetivni refleksi su oslabljeni ili ugašeni. Na licu se često javlja mikrognacija, ptoza, strabizam. Drugi organi takođe zaostaju u razvoju, pa može doći i do oštećenja CNS-a i do mentalne retardacije.

Lečenje: Lečenje dece sa artrgripozom zahteva saradnju fizijataru, hirurga, fizioterapeuta, ergoterapeuta, psihologa, socijalnog radnika, ortotičara, uz rano i potpuno uključivanje roditelja. U principu, lečenje dece sa artrgripozom jeste konzervativno (fizičko i ortotsko) i radikalno (hiruško)...

Cilj rada: Ukazivanje na povećanje broja obolelih od ovog oboljenja u kliničkoj praksi.

Metodologija: Prikaz slučaja.

Zaključak: Bitno je ultrarano početi sa lečenjem svim raspoloživim metodama i tokom prve godine života postići funkcionalne položaje zglobova uz podsticaj motornog razvoja. Cilj je osposobljavanje pacijenata za svakodnevni život, uz postizanje njihove maksimalne nezavisnosti.

Abstract

Arthrogryposis is characterized by congenital multiple joint contractures and muscle weakness. The muscles of the extremities are replaced by fat and connective tissue. The classic form of arthrogryposis is therefore usually called Amyoplasia in recent literature. If there is a change in the respiratory muscles, it can also lead to death, although less often. It is important to emphasize that the condition is not progressive. The prevalence is 1:3000. According to some data, the prevalence in Europe is 1:12,000.

Etiology: Joints develop in the second month of pregnancy, so it is precisely in this period that the cause of this condition can be sought. The reasons given are infection with elevated body temperature, trauma, use of drugs, but also insecticides that are found in sprays against insects, in shampoos against lice, and mass use in agriculture until recently.

Clinical picture: Deformities are more common on distal joints, hands, and feet. The joints are rigid, with thin subcutaneous tissue and the absence of skin folds. In addition to numerous contractures, dislocations (usually of the hips and knees), sometimes the absence of the patella, are also common. Muscles are atrophic, sometimes entire muscle groups are missing. Tendon reflexes are weakened, or extinguished. Micrognathia, ptosis, and strabismus often appear on the face. Other organs also lag behind in development, so damage to the CNS and mental retardation can occur.

Treatment: Treatment of children with arthrogryposis requires the cooperation of physiatrists, surgeons, physiotherapists, occupational therapists, psychologists, social workers, orthotists, with the early and full involvement of parents. In principle, the treatment of children with arthrogryposis is conservative (physical and orthotic) and radical (surgical)...

The aim of the paper: point out the increase in the number of patients with this disease in clinical practice.

Methodology: Case report

Conclusion: It is important to start ultra-early treatment with all available methods and during the first year of life to achieve functional joint positions with stimulation of motor development. The goal is to train patients for everyday life while achieving their maximum independence.





Prikaz slučaja retkog malignoma: fibrosarkom larinksa

Case Report of a Rare Malignoma: Fibrosarcoma of the Larynx

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Apstrakt

Uvod: Sarkomi larinksa predstavljaju manje od 1% svih malignoma larinksa. Fibrosarkom larinksa učestvuje u još manjem procentu u ukupnom broju malignoma larinksa. Nema poznatu ni incidencu, ni prevalencu, kao ni jedinstven protokol lečenja u do sada poznatoj literaturi.

Prikaz slučaja: Prikazali smo pacijenta koji je tokom oktobra/novembra 2022. dijagnostikovao i lečen u Klinici za ORL UKC Kragujevac zbog klinički i patohistološki verifikovanog fibrosarkoma larinksa i to laringomikroskopijom sa biopsijom, kao i odgovarajućim imunohistohemijskim bojenjem isečaka tkiva. Lečen je hirgijom, odnosno totalnom laringektomijom, a na onkološkom konzilijumu je doneta odluka da se dalje lečenje nastavi postoperativnom zračnom terapijom.

Diskusija: Razmatraju se različita iskustva u dijagnostici i lečenju fibrosarkoma larinksa u do sada poznatoj svetskoj literaturi.

Zaključak: I pored nepostojanja jedinstvenog protokola lečenja fibrosarkoma larinksa, potrebno je predložiti mere za unapređenje dijagnostičko-terapijskog protokola na osnovu literaturnih podataka i sopstvenih iskustava.

Abstract

Introduction: Laryngeal sarcomas represent less than 1% of all laryngeal malignancies. Fibrosarcoma of the larynx accounts for an even smaller percentage of the total number of larynx malignancies. There is no known incidence, no prevalence, and no unique treatment protocol.

Case report: We presented a patient who during October/November 2022 was diagnosed and treated at the ENT Clinic of the University Hospital of Kragujevac for clinically and pathohistologically verified fibrosarcoma of the larynx by laryngomicroscopy with biopsy, as well as by appropriate immunohistochemical staining of tissue sections. He was treated with surgery, i.e. total laryngectomy, and at the oncology council it was decided to continue further treatment with postoperative radiation therapy.

Discussion: Considers different experiences in the diagnosis and treatment of fibrosarcoma of the larynx in the world literature known so far.

Conclusion: Despite the lack of a unique treatment protocol for fibrosarcoma of the larynx, it is necessary to propose measures to improve the diagnostic and therapeutic protocol based on literature data and own experiences.





Značaj zakonske regulative za zdravstveni sistem

Importance of Legal Regulations for the Health System

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Apstrakt

Zdravstveni sistem predstavlja jedan od najsloženijih sistema u bilo kojoj državi. Svaka država ima obavezu da brine o zdravstvenom stanju svog stanovništva. Sistem zdravstvene zaštite obuhvata zdravstvenu infrastrukturu koja obezbeđuje pružanje zdravstvene zaštite pojedincima, porodicama i zajednici.

Pojam „zdravstveno zakonodavstvo” se koristi u širokom smislu da označi različita zakonska pravila čiji je objekat zdravlje čoveka i zdravstvena zaštita sa merama i aktivnostima. Zdravstveno zakonodavstvo u Republici Srbiji obuhvata zakone i podzakonska akta kojima se pravnim normama regulišu prava i obaveze korisnika u sistemu zdravstvene zaštite, davaoce zdravstvenih usluga, vrste i način osnivanja zdravstvenih ustanova, upravljanje sistemom zdravstvene zaštite i njegovo finansiranje.

Primarni nivo zdravstvene zaštite mora biti osnovni i centralni deo sistema zdravstvene zaštite i koji treba da pokrije najmanje 2/3 zdravstvenih potreba. To su ustanove u koje građani mogu da odu bez uputa. Zdravstvenu delatnost na primarnom nivou zdravstvene zaštite obavlja dom zdravlja, apotekarska ustanova i zavod (zavod za zdravstvenu zaštitu studenata, zavod za zdravstvenu zaštitu radnika, zavod za urgentnu medicinu, zavod za gerijatriju i palijativno zbrinjavanje, zavod za dentalnu medicinu, zavod za plućne bolesti i tuberkulozu i zavod za kožne i venerične bolesti).

Izmenom plana mreže broj zdravstvenih ustanova sa 357 smanjuje se za bar 20, jer će se svuda gde su dom zdravlja i opšta bolnica u neposrednoj blizini, a ima slučajeva gde dele isto dvorište, oni opet organizovati kao zdravstveni centar.

Sekundarni nivo treba da kroz rad opštih i specijalnih bolnica rešava složenije zdravstvene probleme, koristeći specijalizovane kadrove i višu tehnologiju. Ukoliko dom zdravlja nije u mogućnosti da pruži odgovarajuću specijalističku zdravstvenu zaštitu, doktor medicine će uputiti pacijenta na sekundarni nivo (bolnice). U bolnicama kojih u Srbiji ima 77, svakom pacijentu biće pružena zdravstvena zaštita koja mu je potrebna: ambulantno lečenje (pregled kod lekara specijaliste u poliklinici) ili bolničko lečenje, odnosno lečenje u toj bolnici. Pacijenti se upućuju u bolnicu kada njihov zdravstveni problem prevazilazi tehničke uslove doma zdravlja ili je potrebno stručno mišljenje višeg nivoa.

Tercijarni nivo zdravstvene zaštite mora pružiti vrhunsku dijagnostiku i lečenje kroz visokospecijalizovanu kadrovsku i tehnološku opremljenost. Takođe, tercijarni nivo mora pružiti stručnu pomoć i podršku sekundarnom nivou i obavljati delatnost medicinske edukacije i naučnoistraživačkog rada. Zdravstvenu delatnost na tercijarnom nivou obavljaju: klinika, institut, kliničko-bolnički centar, klinički centar. Ustanove

Abstract

The healthcare system is one of the most complex systems in any country. Every country has an obligation to take care of the health of its population. The health care system includes the health infrastructure that ensures the provision of health care to individuals, families, and the community.

The term “health legislation” is used in a broad sense to denote various legal rules whose object is human health and health care with measures and activities. Health legislation in the Republic of Serbia includes laws and by-laws that regulate the rights and obligations of users in the health care system, health care providers, types and methods of establishment of health care institutions, management of the health care system, and its financing.

The primary level of health care must be the basic and central part of the health care system and should cover at least 2/3 of health needs. These are institutions where citizens can go without instructions. Health activities at the primary level of health care are performed by the health center, pharmacy institution, and institute (institute for student health protection, institute for worker health protection, institute for emergency medicine, institute for geriatrics and palliative care, institute for dental medicine, institute for pulmonary diseases and tuberculosis and the Institute for Skin and Venereal Diseases).

By changing the network plan, the number of health institutions from 357 will be reduced by at least 20, because wherever a health center and a general hospital are in the immediate vicinity, and there are cases where they share the same yard, they will again be organized as a health center.

The secondary level should solve more complex health problems through the work of general and special hospitals, using specialized staff and advanced technology. If the health center is unable to provide appropriate specialist health care, the medical doctor will refer the patient to the secondary level (hospital). In hospitals, of which there are 77 in Serbia, each patient will be provided with the health care he needs: outpatient treatment (examination by a specialist doctor in a polyclinic) or hospital treatment, that is, treatment in that hospital. Patients are referred to the hospital when their health problem exceeds the technical conditions of the health center or a higher-level professional opinion is needed.

The tertiary level of health care must provide superior diagnostics and treatment through highly specialized personnel and technological equipment. Also, the tertiary level must provide professional assistance and support to the secondary level and perform medical education and scientific research activities. Healthcare activities at the tertiary level are performed by: Clinic, Institute, Clinical Hospital Center, and Clinical Center. Tertiary-level institutions can only be established in university headquarters with a faculty of health professions, and tertiary-level institutions (state-



tercijarnog nivoa mogu se osnivati samo u sedištim a univerziteta sa fakultetom zdravstvene struke, takođe ustanove tercijarnog nivoa (u državnoj svojini) u čijem sedištu ne postoji opšta bolnica, moraju pružati i zdravstvene usluge sekundarnog nivoa tj. opšte bolnice.

Načelo poštovanja ljudskih prava i vrednosti u zdravstvenoj zaštiti podrazumeva obezbeđivanje najvišeg mogućeg standarda ljudskih prava i vrednosti u pružanju zdravstvene zaštite, pre svega prava na život, nepovredivost fizičkog i psihičkog integriteta i neprikosnovenost ljudskog dostojanstva, obezbeđivanje ravnopravnosti polova i rodne ravnopravnosti, uvažavanje moralnih, kulturnih, religijskih i filozofskih ubeđenja građanina, kao i zabranu kloniranja ljudskih bića.

Pružaoци zdravstvene zaštite su:

1. zdravstvene ustanove u javnoj i privatnoj svojini;
2. visokoškolske ustanove zdravstvene struke i druga pravna lica za koja je posebnim zakonom predviđeno da obavljaju i poslove zdravstvene delatnosti;
3. privatna praksa;
4. zdravstveni radnici koji obavljaju zdravstvenu delatnost;
5. druge visokoškolske ustanove, odnosno naučno-obrazovne i naučne ustanove, uz mišljenje ministarstva.

owned) whose headquarters do not have a general hospital must also provide secondary-level health services, i.e. general hospitals.

The principle of respect for human rights and values in health care implies ensuring the highest possible standard of human rights and values in the provision of health care, above all the right to life, inviolability of physical and psychological integrity, and inviolability of human dignity, ensuring gender equality and gender equality, respect for moral, cultural, religious and philosophical beliefs of citizens, as well as the prohibition of cloning of human beings.

Healthcare providers are:

1. Health institutions in public and private ownership;
2. Higher education institutions of the health profession and other legal entities for which a special law provides that they also perform health activities;
3. Private practice;
4. Healthcare workers who perform healthcare activities;
5. Other higher education institutions, i.e. scientific-educational and scientific institutions, with the opinion of the Ministry.



Multidisciplinarni pristup u lečenju karcinoma dojke

A Multidisciplinary Approach to the Treatment of Breast Cancer

Draško Dačić

Opšta bolnica Požarevac

General Hospital Požarevac

Apstrakt

Uvod: Karcinom dojke čini oko ¼ od svih maligniteta kod žena. Rizik za nastajanje karcinoma dojke je 12,5% (1 od 8 žena). Mortalitet u Srbiji iznosi oko 20/100000, dok je stopa incidence 61,4/100000. Učestalost bolesti na globalnom nivou raste poslednjih 30 godina za 3,1% godišnje. U razvijenim zemljama 60% karcinoma dojke se otkrije u stadijumu lokalizovane bolesti, samo 10% u odmaklom stadijumu. Rekonstrukcija dojke ne utiče na ponovnu pojavu tumora niti na tok ili prognozu bolesti. Rekonstrukcija dojke ima snažan uticaj na kvalitet života kroz pozitivan psihološki efekat.

Cilj: Ispitati kvalitet života nakon postavljanja dijagnoze, analizom psihičkog i fizičkog stanja, kao i socijalne osposobljenosti.

Metodologija rada: Rad je urađen po formi prikaza slučajeva, analizom naučnih i stručnih radova, kao i korišćenjem ličnog iskustva u praksi. Podaci su uzeti iz istorija bolesti, protokola i anamneze.

Zaključak: Trijaža i postavljanje što ranije dijagnoze, praćenje suspektnih promena, što veći procenat preoperativnih dijagnoza, adekvatno hirurško lečenje, praćenje i obrada operisanih bolesnica, edukacija šire populacije kroz medije, kao i organizovanje tribina, jasni su pokazatelji poboljšanja kvaliteta života pacijenata sa karcinomom.

Abstract

Introduction: Breast cancer accounts for about ¼ of all malignancies in women. The risk of developing breast cancer is 12.5% (1 in 8 women). Mortality in Serbia is about 20/100,000, while the incidence rate is 61.4/100,000. The frequency of the disease at the global level has been increasing for the last 30 years by 3.1% per year. In developed countries, 60% of breast cancer is detected in the stage of localized disease, and only 10% in the advanced stage. Breast reconstruction does not affect the recurrence of the tumor or the course or prognosis of the disease. Breast reconstruction has a strong impact on the quality of life through a positive psychological effect

Aims: To examine the quality of life after the diagnosis, by analyzing the psychological and physical condition, as well as social skills

Methodology of the paper: The paper was written in the form of case reports, analysis of scientific and professional works, as well as personal work experience. Data were taken from medical histories, protocols, and anamnesis.

Conclusion: Triage and diagnosis as early as possible, monitoring of suspicious changes, as high a percentage of preoperative diagnoses as possible, adequate surgical treatment, monitoring and treatment of operated patients, education of the wider population through the media as well as by organizing forums are clear indicators of improving the quality of life of cancer patients.





Sestrinske intervencije kod dementnih pacijenata

Nursing Interventions in Dementia Patients

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University Clinical Center Kragujevac

Apstrakt

Demencija podrazumeva niz simptoma prouzrokovanih poremećajima koji utiču na mozak. To nije jedna konkretna bolest. Demencija utiče na razmišljanje, ponašanje i sposobnost obavljanja svakodnevnih radnji. Utiče na funkciju mozga dovoljno da ometa normalan društveni ili radni život osobe. Karakteristika demencije je nemogućnost obavljanja svakodnevnih aktivnosti, a to je posledica umanjene kognitivne sposobnosti. Rani znaci demencije mogu biti veoma blagi, nejasni i možda neće biti odmah očigledni.

Neki od najčešćih simptoma mogu da uključuje:

- progresivno i često gubljenje pamćenja,
- zbunjenost,
- promenu ličnosti,
- apatiju i povlačenje,
- gubitak sposobnosti za obavljanje svakodnevnih zadataka.

Sestrinske intervencije su usmerene na ojačavanje preostalih snaga, bezbednost pacijenta, ishranu, terapiju i zdravstvenu negu.

Prikazom slučaja prikazaće se sve sestrinske intervencije kod pacijenta sa komorbiditetima i sa demencijom.

Abstract

Dementia involves a range of symptoms caused by disorders affecting the brain. It is not a specific disease. Dementia affects thinking, behavior, and the ability to carry out everyday activities. It affects brain function enough to interfere with a person's normal social or work life. Dementia is characterized by the inability to perform daily activities as a result of reduced cognitive ability. Early signs of dementia can be very mild, vague, and may not be immediately apparent.

Some of the more common symptoms may include:

- progressive and frequent memory loss
- confusion
- personality change
- apathy and withdrawal
- loss of ability to perform everyday tasks

Nursing interventions are focused on strengthening the remaining forces, patient safety, nutrition, therapy, and health care.

The case report will show all nursing interventions in a patient with comorbidities and dementia.





Vanbolnički stečene pneumonije

Nosomical Pneumonia

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Special Hospital for Lung Diseases “Ozren”, Sokobanja

Apstrakt

Vanbolnički stečena pneumonija predstavlja akutnu inflamaciju plućnog parenhima, koja se na radiografiji grudnog koša manifestuje prisustvom kondenzacije, uz prateći auskultacijski nalaz i kliničke znake bolesti (povišena telesna temperatura, malaksalost, kašalj, iskašljavanje, dispneja, bol u grudima).

Najčešći izazivači respiratornih infekcija su gram-pozitivne bakterije, dok su u kolektivima, posebno među adolescentima, česte infekcije izazvane atipičnim intracelularnim mikroorganizmima i virusima. Oko dve trećine svih vanbolničkih pneumonija izaziva *Streptococcus pneumoniae*, dok među ostalim patogenima značajno mesto zauzimaju: *Haemophilus influenzae*, *Moraxella catarrhalis*, *Mycoplasma pneumoniae*, respiratorni virusi i *Staphylococcus aureus*.

Principi lečenja vanbolničkih pneumonija bazirani su na empirijskom započinjanju terapije, a na osnovu prethodnih saznanja o najverovatnijem etiološkom uzročniku infekcije u određenoj kategoriji bolesnika, uslovima pod kojima je infekcija nastala i težini kliničke slike pneumonije. Savremeni vodiči, shodno proceni težine pneumonija određuju kriterijume za hospitalizaciju, dijagnostičke postupke, dužinu lečenja i primenu antibiotika.

Abstract

Out-of-hospital acquired pneumonia is an acute inflammation of the lung parenchyma, which is manifested on chest X-ray by the presence of condensation, accompanied by auscultatory findings and clinical signs of the disease (elevated body temperature, malaise, cough, expectoration, dyspnea, chest pain).

The most common causes of respiratory infections are gram-positive bacteria, while in collectives, especially among adolescents, frequent infections are caused by atypical intracellular microorganisms and viruses. About two-thirds of all community-acquired cases of pneumonia are caused by *Streptococcus pneumoniae*, while other pathogens include: *Haemophilus influenzae*, *Moraxella catarrhalis*, *Mycoplasma pneumoniae*, respiratory viruses, and *Staphylococcus aureus*.

The principles of treatment of community-acquired pneumonia are based on the empirical initiation of therapy, and on the basis of previous knowledge about the most likely etiological cause of infection in a certain category of patients, the conditions under which the infection occurred, and the severity of the clinical picture of pneumonia. Modern guidelines, according to the assessment of the severity of pneumonia, determine the criteria for hospitalization, diagnostic procedures, length of treatment, and the use of antibiotics.





Savremeni onkološki pristup u lečenju metastaza u jetri

Modern Oncological Approach in the Treatment of Liver Metastasis

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University Clinical Center Niš

Apstrakt

Metastatski karcinom jetre i metastaze u jetri nisu sinonimi. Dok je metastatski karcinom jetre uznapredovala faza bolesti koja je započela u jetri i proširila se na druge delove tela, metastaze u jetri čine maligne ćelije tumora drugih tkiva i organa koje su metastazirale u jetru.

Jetra je omiljeno mesto metastaza. To se objašnjava činjenicom da jetra ima razgranatu vaskulaturu, pre svega vensku (v. porte) kao i arterijsku (a. hepatica) i obrađuje 1,5 litara krvi u minuti. Najčešće hematogene metastaze u jetri su metastaze karcinoma kolorektuma, dojke, pankreasa, želuca, jednjaka, pluća i dojke. Nisu retke metastaze melanoma i neuroendokrinih tumora.

Donošenje odluke o vrsti tretmana zavisi od:

- primarnog tumora,
- lokalizacije metastaza,
- broja metastaza,
- veličine metastaza,
- postojanja metastaze u drugim organima,
- specifične onkološke terapije koju je pacijent već primao,
- očuvanosti funkcionalnog kapaciteta jetre (Chikd-Pugh skor).

Pristup terapiji metastaza u jetri mora biti multidisciplinarnan. Cilj multidisciplinarnog tima je da prikupi sve neophodne medicinske informacije i da na osnovu njih, uzimajući u obzir i mišljenje pacijenta u vezi sa terapijom, donese odluku o administraciji adekvatne terapije.

U radu će biti prikazana savremena onkološka terapija: radioterapija, sistemska hemioterapija, biološka terapija, kao i njihove kombinacije.

Abstract

Metastatic liver cancer and liver metastases are not synonymous. While metastatic liver cancer is an advanced stage of the disease that starts in the liver and spreads to other parts of the body, liver metastases are malignant cells from tumors of other tissues and organs that have metastasized to the liver.

The liver is a favorite location for metastases. This is explained by the fact that the liver has a branched vasculature, primarily venous (v. porte) as well as arterial (a. hepatic), and processes 1.5 liters of blood per minute. The most common hematogenous liver metastases are colorectal, breast, pancreatic, stomach, esophagus, lung, and breast cancer metastases. Metastases of melanoma and neuroendocrine tumors are not rare.

Deciding on the type of treatment depends on:

- Primary tumor
- Localization of metastases
- Number of metastases
- The size of metastases
- Are there any metastases in other organs
- Specific oncological therapy that the patient has already received
- Preservation of the functional capacity of the liver (Chikd-Pugh score).

The approach to the therapy of liver metastases must be multidisciplinary. The goal of the multidisciplinary team is to collect all the necessary medical information and, based on it, take into account the patient's opinion regarding the therapy, and make a decision on the administration of adequate therapy.

The paper will present modern oncology therapy: radiotherapy, systemic chemotherapy, and biological therapy, as well as their combinations.





Uticaj medicinske rehabilitacije na kvalitet života obolelih

The Influence of Medical Rehabilitation on the Patients' Life Quality

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Apstrakt

Uvod: Rehabilitacija se opisuje kao proces usredsređen na pacijenta koji odražava način na koji se pacijenti i zdravstveni radnici međusobno angažuju i saraduju radi postizanja najbolje moguće funkcije za pacijente u interakciji sa njihovim okruženjem. Ubrzani napredak nauke i tehnike, a paralelno sa njima i medicine, doprineo je da se život ljudi olakša, ali uporedo sa tim došli su i novi problemi koje treba rešavati. Zbog povećanog traumatizma u svim sredinama, ljudsko zdravlje, pa i ljudski životi su sve ugroženiji, a zbog načina života, sve je veći broj dece sa urođenim i stečenim deformitetima tela. Sa napretkom medicinske dijagnostike i lečenja, povećava se broj osoba koje preživljavaju i najteži traumatizam, ali istovremeno se povećava i broj trajno onesposobljenih ljudi. Posledica porasta broja onesposobljenih ljudi jeste brzi razvoj savremene medicinske rehabilitacije i uvođenje novih postupaka i metoda u proces lečenja. I tako dolazimo do toga da je rehabilitacija obolelih bilo koje etiologije neophodna kako bi se smanjio invaliditet, a samim tim poboljšao kvalitet života i vratio obolele svakodnevnim aktivnostima, porodici i celokupnom zadovoljstvu života.

Cilj rada: Prikazati uticaj medicinske rehabilitacije na kvalitet života obolelih nakon sprovedene rane i/ili produžene rehabilitacije u stacionarnim ili ambulantnim uslovima.

Metod rada: Opservaciona studija nekoliko metaanaliza koje se bave ovom problematikom za procenu kvaliteta života pre i posle rehabilitacije, gde se koriste opšti (generički) i specifični upitnici, kao što je validirana srpska verzija upitnika bolnice „Sveti Đorđe“ („St. George's Respiratory Questionnaire“) za hroničnu opstruktivnu bolest pluća (HOBP).

Rezultati: Dobijeni su podaci o povoljnom uticaju rehabilitacije na kvalitet života obolelih, mereni opštim i specifičnim upitnicima.

Zaključak: Značaj rehabilitacije je nemerljiv za prevenciju invaliditeta i poboljšanje kvaliteta života kako bi se oboleli vratili svakodnevnim aktivnostima.

Abstract

Introduction: Rehabilitation is described as a patient-centered process that reflects how patients and healthcare professionals engage and collaborate with each other to achieve the best possible function for patients in interaction with their environment. Due to the accelerated progress of science and technology, and also medicine, it contributed to making people's lives easier, but along with that came new problems that need to be solved. On account of increased traumatism in all environments, human health and human lives are increasingly threatened. And because of the way of life, the number of children with congenital and acquired body deformities is increasing. With the progress of medical diagnosis and treatment, the number of people who survive even the most severe trauma is rising, but at the same time, the number of permanently disabled people. As a consequence of the increase in the number of disabled people, there is a rapid development of modern medical rehabilitation and the introduction of new procedures and methods into the treatment process. Therefore, we conclude that the rehabilitation of patients of any etiology is necessary in order to reduce disability and thereby improve the quality of life and return patients to daily activities, family, and overall satisfaction.

The aim of the paper: to present the impact of medical rehabilitation on the quality of life of patients after early and/or prolonged rehabilitation in inpatient or outpatient conditions

Method of paper: an observational study of several meta-analyses that deal with this issue to assess the quality of life before and after rehabilitation, where general (generic) and specific questionnaires are used, such as the validated Serbian version of the questionnaire of the "Sveti Đorđe" hospital for chronic obstructive pulmonary disease (COPD).

Results: Data were obtained on the favorable impact of rehabilitation on the quality of life of patients, measured by general and specific questionnaires.

Conclusion: The importance of rehabilitation is immeasurable for the prevention of disability and improvement of the quality of life in order for patients to return to their daily activities.





Multidisciplinarnost u terapiji bola

Multidisciplinary in Pain Therapy

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Apstrakt

Bol se, prema definiciji SZO, definiše kao neprijatno čulno ili emocionalno iskustvo povezano sa stvarnim ili potencijalnim oštećenjem tkiva. Opisuje se sa nekoliko različitih karakteristika: kvalitetom, lokalizacijom, intenzitetom, emocionalnim uticajem, promenom ponašanja, učestalošću. Prateći je faktor svih bolesti i povreda. Ako je akutan – smatra se zaštitnim mehanizmom i pomaže da organizam postane svestan opasnosti i reaguje da bi nadražaj uklonio, za razliku od hroničnog. Neophodno je poznavati vrstu i intenzitet bola, individualne karakteristike pacijenta i lekova. Multidisciplinarni pristup lečenju bola je mnogo efikasniji i daje bolje rezultate. Najznačajnija klinička dimenzija doživljavanja bola je doživljaj intenziteta bola. Kompleksna ljudska iskustva sa funkcionalnim, emotivnim i duhovnim komponentama utiču na doživljaj bola. Medijatori zapaljenja su patološki prostaglandini koji utiču na razvoj bola, otoka i temperature, ali i do patološke promene tkiva. Nesteroidni antiinflamatorni lekovi su prva linija terapije akutnog bola, inhibiraju ciklooksigenazu, čime se sprečava njihova sinteza, a time i delovanje na senzitivne neurone u kičmenoj moždini odgovorne za provođenje bolnih impulsa. Imaju trostruko dejstvo: antiinflamatorno, analgetsko i antipiretično. Svakodnevna komunikacija i savetovanje pacijenata moraju biti bazirani na medicinski dokazanim postulatima. Dobro sumiranje naučnih misli bazira se prvenstveno na sagledavanju bezbednosnih profila lekova na tržištu Srbije, a zatim na komparaciji o efikasnosti i sličnosti analgetske aktivnosti između selektivnih i neselektivnih lekova. Formulacije koje se smatraju brzodelujućim mogu imati jednaku efikasnost u duplo manjoj dozi, a klinička istraživanja pokazuju da u nižoj dozi neki NSAID pokazuju maksimum analgetskog efekta, dok veće doze iskazuju blago povećanje trajanja analgetskog efekta. Takođe, samoodgovornost pacijenta je bitan faktor u terapiji bola. Posebni režim antiinflamatorne ishrane (mediteranska ishrana, antioksidansi, dobre masti i žitarice) umanjuje osećaj bola 35–60%, a detoksikacija, fizička aktivnost, regulisanje telesne težine, prestanak pušenja i dobar izbor mikronutrijenata dodatno sinergistički poboljšavaju rezultate. Farmaceut je danas najdostupniji zdravstveni radnik. Dobrom analizom nacionalnih vodiča, edukacijama i komunikacijama sa lekarima i prenošenjem znanja iz prakse, korišćenjem medicinski opravdanih upitnika, ali i kreiranjem multidisciplinarnog algoritma pitanja, smernica i saveta, pomoć pacijentu i bolja zdravstvena usluga i u stručnom, ali i farmakoeonomskom aspektu su sigurni.

Abstract

According to the WHO definition, pain is defined as an unpleasant sensory or emotional experience associated with actual or potential tissue damage. It is described with several different characteristics: quality, localization, intensity, emotional impact, change in behavior, and frequency. It is the accompanying factor of all diseases and injuries. If it is acute - it is considered a protective mechanism and helps the organism to become aware of the danger and react to remove the stimulus, unlike chronic. It is necessary to know the type and intensity of pain, the individual characteristics of the patient, and the medication. A multidisciplinary approach to pain management is much more effective and produces better results. The most important clinical dimension of experiencing pain is the experience of pain intensity. Complex human experiences with functional, emotional, and spiritual components influence the experience of pain. Mediators of inflammation are pathological levels of prostaglandins, which influence the development of pain, swelling, and temperature, but also lead to pathological tissue changes. Non-steroidal anti-inflammatory drugs are the first line of therapy for acute pain, they inhibit cyclooxygenase, which prevents their synthesis, and thus the action on sensitive neurons in the spinal cord - responsible for conducting painful impulses. They have a triple effect: anti-inflammatory, analgesic, and antipyretic. Daily communication and advising of patients must be based on medically proven postulates. A good summarization of scientific thoughts is primarily based on an overview of the safety profiles of drugs on the market of Serbia, and then on a comparison of the effectiveness and similarity of analgesic activity between selective and non-selective drugs. Formulations that are considered fast-acting can have the same effectiveness in half the dose, and clinical research shows that at a lower dose, some NSAIDs show the maximum analgesic effect, while higher doses show a slight increase in the duration of the analgesic effect. Also, the patient's self-responsibility is an important factor in pain therapy. A special regimen of anti-inflammatory nutrition (Mediterranean diet, antioxidants, healthy fats, and cereals) reduces the feeling of pain by 35-60%, and detoxification, physical activity, regulation of body weight, quitting smoking, and a good selection of micronutrients additionally synergistically improve the results. A pharmacist is the most accessible healthcare professional today. With a good analysis of the National Guides, education, and communication with doctors and the transfer of knowledge from practice, using medically justified Questionnaires, but also by creating a multidisciplinary algorithm of questions, guidelines, and advice, help the patient and better health service both in the professional and pharmacoeconomic aspect are assured.





Zdravstveno-vaspitni rad na terenu, preporučena aktivna imunizacija

Health Education Work in the Field, Recommended Active Immunization

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Institute for Public Health Niš

Apstrakt

Uvod: Među svim merama prevencije zaraznih bolesti, imunizacija predstavlja najbržu, najefikasniju i ekonomski najopravdaniju meru.

Cilj rada je pokazati značaj preporučene imunizacije.

Mera je bliže regulisana Zakonom o zdravstvenoj zaštiti stanovništva od zaraznih bolesti. Posebno su novine uvedene u članu 32 gde je definisano da se sprovodi imunološkim lekovima i time se usklađuje sa Zakonom o lekovima. Definisana je obavezna imunizacija i bolesti protiv kojih se sprovodi, a sve je grupisano prema indikacijama.

Uvedena je preporučena imunizacija kao novi vid imunizacije i omogućena je za sve bolesti za koje postoji vakcina, a i utvrđene su grupe indikacija prema kojima se sprovodi, precizno je navedena obaveza imunizacije i provera vakcinalnog statusa pre ulaska u predškolske i školske kolektive. Definisana je i neobavezna imunizacija kako bi se napravila razlika u odnosu na preporučenu. Članom 33 definisana je vanredna imunizacija, kao i uslovi prema kojima se imunizacija protiv neke bolesti može uvesti kao obavezna, kao i put i osnov za takvu odluku. Preporučena imunizacija je imunizacija koju doktor medicine ili specijalista odgovarajuće grane medicine preporučuje, u skladu sa programom imunizacije stanovništva protiv određenih zaraznih bolesti. Kod preporučene imunizacije neophodna je pismena saglasnost ili odbijanje saglasnosti za preporučenu aktivnu imunizaciju i ona se daje na Obrascu 3. Potpisana saglasnost je deo medicinske dokumentacije koja se čuva u zdravstvenom kartonu pacijenta. Značaj prevencije masovnih zaraznih bolesti i edukacija zdravstvenih radnika, koji istu sprovode sa stanovništvom i građanima, velika je karika u radu na prevenciji nastanka i u cilju suzbijanja zaraznih bolesti.

Zaključak: Zdravstveno-vaspitni rad je od velikog značaja u sprovođenju imunizacije. Upoznavanje stanovništva sa značajem vakcinacije je zadatak svih zdravstvenih radnika, jer medicina počiva na poverenju između zdravstvenih radnika i građana.

Abstract

Introduction: Among all infectious disease prevention measures, immunization is the fastest, most effective, and economically justifiable measure.

The aim of the paper is to show the importance of the recommended immunization.

The measure is more closely regulated by the Law on Health Protection of the Population from Infectious Diseases. In particular, the novelties were introduced in Article 32, where it is defined that it is carried out with immunological drugs, thus harmonizing it with the Law on Medicines. Mandatory immunization and diseases against which it is carried out are defined, and everything is grouped according to indications.

The recommended immunization is available for all diseases for which there is a vaccine, and the groups of indications according to which it is carried out are determined. The obligation of immunization and checking the vaccination status before entering preschool and school collectives are precisely stated. Optional immunization is also defined in order to make a difference from the recommended one: Article 33 defines extraordinary immunization, as well as the conditions under which immunization against a certain disease can be introduced as mandatory, as well as the way and basis for such a decision. Recommended immunization is immunization recommended by a medical doctor or a specialist in the appropriate branch of medicine, in accordance with the population immunization program against certain infectious diseases. In the case of recommended immunization, written consent or refusal of consent for recommended active immunization is required on Form 3. The signed consent is part of the medical documentation that is included in the patient's health record. The importance of the prevention of mass infectious diseases and the education of health workers, who carry out the same with the population and citizens, is a strong link in the work on the prevention of the occurrence and the goal of suppressing infectious diseases.

Conclusion: Health education work is of great importance in the implementation of immunization. Acquainting the population with the importance of vaccination is the task of all health workers: medicine rests on trust between health workers and citizens.





Periferni krvni sudovi i kovid-19 – da li smo dobili nove radiološke smernice? Peripheral Blood Vessels and COVID-19 - Have We Received New Radiological Guidelines?

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Apstrakt

Pandemija izazvana novim korona virusom kovid-19 (SARS-CoV-2), koja se obrušila na svet 2019. godine karakteriše se značajnim morbiditetom i mortalitetom. Bilo je potrebno vreme da se uoči značaj trombotičkih komplikacija, koje se sve više prepoznaju kao važna komponenta ove bolesti.

Ovim revijalnim radom dat je pregled trombotičkih komplikacija koje su povezane sa virusom kovid-19, sa naglaskom na važnosti prepoznavanja ovih komplikacija u ranoj fazi bolesti, čime bi se predupredio neželjeni tok bolesti. Ovo je značajno za lekare koji se bave imidžingom, intenziviste, infektologe, lekare urgentne medicine, ali i za druge specijalnosti.

Veruje se da su trombotičke komplikacije od kovid-19 infekcije nastale usled hiperinflamatornog odgovora izazvanog virusom. U literaturi je opisano nekoliko komplikacija. To uključuje akutnu ishemiju ekstremiteta, trombozu trbušne i torakalne aorte, mezenterijsku ishemiju, infarkt miokarda, venski tromboembolizam, akutni cerebrovaskularni insult i diseminiranu intravaskularnu koagulaciju.

Važno je da kliničari koji prime ove pacijente budu svesni trombotičkih komplikacija kovid-19 infekcije. Poznavanje ovih patofizioloških mehanizama neophodno je za rano prepoznavanje i lečenje radi smanjenja morbiditeta i mortaliteta kod ovih pacijenata. Posebno važno je istaći ulogu radiologije u ranoj dijagnostici i praćenju toka bolesti kod naših pacijenata. Posebno je važno naglasiti da je MDCT angiografija superiorna metoda u dijagnozi tromboze perifernih krvnih sudova.

Abstract

The pandemic caused by the new coronavirus COVID-19 2 (SARS-CoV-2), which hit the world in 2019, is characterized by significant morbidity and mortality. It took time to see the importance of thrombotic complications, which are increasingly recognized as an important component of this disease.

This review paper provides an overview of thrombotic complications associated with COVID-19, with an emphasis on the importance of recognizing these complications in the early stages of the disease, which would prevent the unwanted course of the disease. This is significant for doctors dealing with imaging, intensivists, infectious disease specialists, and emergency medicine doctors, but also for other specialties.

Thrombotic complications from COVID-19 are believed to be due to a hyperinflammatory response caused by the virus. Several complications have been described in the literature. These include acute limb ischemia, thrombosis of the abdominal and thoracic aorta, mesenteric ischemia, myocardial infarction, venous thromboembolism, acute cerebrovascular insult, and disseminated intravascular coagulation.

It is important that clinicians who see these patients are aware of the thrombotic complications of COVID-19. Knowledge of these pathophysiological mechanisms is essential for early recognition and treatment to reduce morbidity and mortality in these patients. It is especially important to emphasize the role of radiology in early diagnosis and monitoring the course of the disease in our patients. It is especially important to emphasize that MDCT-angiography is a superior method in the diagnosis of thrombosis of peripheral blood vessels.





Upotreba spoljašnjeg fiksatora u ortopediji u ustanovama sekundarne zdravstvene zaštite

Use of External Fixator in Orthopedics in Secondary Healthcare Institutions

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Apstrakt

Uvod: Spektar indikacija za upotrebu spoljašnjeg fiksatora u savremenoj ortopediji je dosta sužen u odnosu na istorijat ortopedije. Na ulogu spoljašnje fiksacije se uglavnom gleda kao na privremeno sredstvo za osteosinezu različitih preloma i na hirurške postupke vezane za „kontrolu štete” i otvorene prelome. Postoje brojni podaci u literaturi gde se konverzija u neku od drugih metoda izvodi čak i kod najtežih otvorenih preloma. Ipak, klinička iskustva u radu sa ovom metodom pokazuju da kada ne postoji uvek mogućnost lečenja najsavremenijim implantantima, metoda spoljašnje fiksacije se može upotrebiti i kao definitivni metod lečenja, praktično sa istim funkcionalnim rezultatima kao i druge metode lečenja.

Cilj: Pregled savremene literature o indikacijama i načinu izvođenja metode spoljašnje fiksacije. Prikazati rezultate rada na spoljašnjoj fiksaciji na nivou sekundarne zdravstvene zaštite. Prikazati način rada u previjalištima umreženih domova zdravlja i obuke pacijenata za negu okoline klinova.

Materijal i metodologija: Klinička iskustva rada na preko 500 pacijenata lečenih metodom spoljašnje fiksacije u ZC Kosovska Mitrovica, uz prikaz načina nege okoline klinova u previjalištima pripadajućih domova zdravlja.

Abstract

Introduction: The spectrum of indications for the use of an external fixator in modern orthopedics is quite narrow compared to the history of orthopedics. The role of external fixation is mainly seen as a temporary tool for osteosynthesis of various fractures and for surgical procedures related to “damage control,” and open fractures. There are numerous data in the literature where conversion to one of the other methods is performed even in the most severe open fractures. However, clinical experience in working with this method shows that when it is not always possible to treat with state-of-the-art implants, the method of external fixation can be used as a definitive treatment method with practically the same functional results as other treatment methods.

Aims: Review of contemporary literature on the indications and method of performing the external fixation method. Show the results of work on external fixation at the level of secondary health care. Show the way of working in changing rooms of networked health centers and training patients to care for the environment of wedges.

Material and methodology: Clinical experiences of working on over 500 patients treated with the method of external fixation in ZC Kosovska Mitrovica with a presentation of the care of the area around the wedges in the changing rooms of the associated health centers.





Standardi i uslovi za bezbednu transfuziju krvnih produkata

Standards and Conditions for Safe Transfusion of Blood Products

Ana Antić

Zavod za transfuziju krvi Niš

Blood Transfusion Institute of Niš

Apstrakt

Efikasna i bezbedna klinička primena produkata od krvi jedan je od uslova kvalitetne zdravstvene zaštite i glavnih prioriteta Svetske zdravstvene organizacije. Ključni elementi u strategiji postizanja optimalne bezbednosti transfuzije produkata od krvi jesu formiranje jasno definisanih standarda u radu i stalno praćenje najnovijih saznanja i stavova o kliničkoj primeni komponenata krvi.

Savremena komponentna terapija podrazumeva obavezna pretransfuzijska testiranja, koja imaju za cilj obezbeđenje optimalnog preživljavanja transfundovanih eritrocita, uz smanjenje rizika za pacijenta. Osnovni elementi pretransfuzijskih ispitivanja su precizno određeni preporukama Britanskog komiteta za standarde u hematologiji, kao i preporukama za pripremu, upotrebu i obezbeđenje kvaliteta komponenata krvi Saveta Evrope. Pored toga neophodna je svakodnevna kontrola produkata koji se proizvode i pripremaju u službi transfuzije po preporukama Saveta Evrope, kako bi se omogućila standardizacija produkata i povećao kvalitet i efikasnost u radu. Zapravo, implementacija kliničkih vodiča, edukacija zaposlenih i kontrola svakodnevne prakse čine osnovne elemente kvaliteta kojima se može ostvariti dobra transfuziološka praksa i uspostaviti jedinstvena strategija rada.

Svaka bolnica i služba za transfuziju treba da ima propisanu medicinsku dokumentaciju koja prati postupak primene krvnih komponenti od početka do kraja procesa i koja obavezuje sve učesnike u procesu transfuzije. Transfuzijskoj dokumentaciji koja prati pretransfuzijska ispitivanja pripadaju zahtevi za krv i krvne komponente, nalog za isporuku komponenti, rezultat krvne grupe pacijenta, rezultat interakcije, dostavnice o isporuci, protokol o rezultatima pretransfuzijskih ispitivanja, protokol o rezultatima krvnih grupa pacijenata, kontrole reagenasa u radu. S obzirom na kompleksnost i ulogu testiranja koja prethode transfuziji produkata krvi, neophodno je poštovanje standarda i propisa u svakoj fazi procesa, kako bi se izbegle moguće ljudske i tehničke greške i garantovala dobra transfuzijska praksa. Izbor krvi za transfuziju zasnovan je na rezultatima pretransfuzijskih ispitivanja. Za transfuziju se primenjuju ABO Rh (D) istogrupni eritrociti, a ako nema dovoljne količine na zalihama, primenjuju se eritrociti kompatibilne krvne grupe ili eritrociti krvne grupe O. Ukoliko u serumu pacijenta postoje aloantitela čija je specifičnost određena, primenjuju se fenotipizirani eritrociti koji na svojoj membrani nemaju antigene za antitelo koje postoji u serumu. Kod postojanja autoantitela primenjuju se eritrociti sa pozitivnom interakcijom jačine jednake ili manje od pozitivnosti autokontrole.

Abstract

Effective and safe clinical application of blood products is one of the conditions of quality health care and the main priorities of the World Health Organization. The key elements in the strategy of achieving optimal blood product transfusion safety are the formation of clearly defined work standards and constant monitoring of the latest knowledge and attitudes about the clinical application of blood components.

Modern component therapy involves mandatory pre-transfusion tests, which aim to ensure optimal survival of transfused erythrocytes while reducing the risk for the patient. The basic elements of pre-transfusion tests are precisely determined by the Recommendations of the British Committee for Standards in Hematology, as well as the Recommendations for the preparation, use, and quality assurance of blood components of the Council of Europe. As a matter of fact, daily control of the products that are produced and prepared in the transfusion service is necessary according to the recommendations of the Council of Europe, in order to enable the standardization of products and increase the quality and efficiency of work. In fact, the implementation of clinical guidelines, employee education, and daily practice control are the basic elements of quality that can be used to achieve good transfusion practice and establish a unique work strategy.

Every hospital and transfusion service should have prescribed medical documentation that follows the procedure of blood component application from the beginning to the end of the process and that binds all participants in the transfusion process. Transfusion documentation accompanying pre-transfusion tests include the requirement for blood and blood components, the order for the delivery of components, the result of the patient's blood type, the result of the interaction, delivery notes, the protocol on the results of pre-transfusion tests, the protocol on the results of the patient's blood types, reagent controls in work. Given the complexity and role of testing that precedes the transfusion of blood products, compliance with standards and regulations is necessary at every stage of the process, in order to avoid possible human and technical errors and guarantee good transfusion practice. The selection of blood for transfusion is based on the results of pre-transfusion tests. For transfusion, ABO Rh(D) identical erythrocytes are used, and if there are not enough in stock, erythrocytes of compatible blood type or erythrocytes of blood type O are used. If there are alloantibodies in the patient's serum, the specificity of which has been determined, phenotypic erythrocytes that do not have on their membrane are used antigens for the antibody that exists in the serum. In the presence of autoantibodies, erythrocytes with a positive interaction strength equal to or less than the positivity of the auto control are applied.



Transfuzijska terapija je veoma korisna, ali može biti udružena sa neželjenim efektima, zbog čega primena nije bez rizika po bolesnika. Među njima najistaknutije mesto imaju hemolizne transfuzijske reakcije, do kojih dolazi kako zbog inkompatibilnosti između eritrocitnih krvnih grupa primaoca i davaoca krvi, tako i zbog nepravilnog skladištenja i rukovanja krvlju i komponentama. Adekvatna prijava posttransfuzijske reakcije i upoznavanje sa aktivnostima koje se po prijave sprovode prvi su preduslov za unapređenje i poboljšanje postojeće kliničke prakse i najbolji način za zaštitu i unapređenje zdravlja svih bolesnika. Treba poštovati zakon, procedure i protokole rada i kontinuirano sprovoditi predviđene kontrole kako bi se mogućnost neželjenih efekata transfuzije smanjila na najmanju moguću meru. Takođe, neophodna je edukacija svih zdravstvenih i drugih radnika zaposlenih na poslovima transfuzije, na svakom segmentu transfuziološkog lanca, od okupljanja i odabira davalaca krvi, do uključivanja transfuzije bolesniku.

Transfusion therapy is very useful, but it can be connected with unwanted effects, which is why the application is not without risks for the patient. The most prominent among them are hemolytic transfusion reactions, which occur both due to incompatibility between the erythrocyte blood types of the recipient and the blood donor, as well as due to improper storage and handling of blood and components. Adequate reporting of post-transfusion reactions and familiarization with the activities that are carried out after reports are the first precondition for the improvement and improvement of existing clinical practice and the best way to protect and improve the health of all patients. The law, procedures, and work protocols should be respected and the planned controls should be continuously implemented in order to minimize the possibility of side effects of the transfusion. Also, it is necessary to educate all healthcare and other workers employed in transfusion work, at every segment of the transfusion chain, from the gathering and selection of blood donors to the inclusion of a patient's transfusion.

Terapija II klase modifikacijom rasta, sa posebnim osvrtom na primenu „M” blok aparata

Class II Therapy by Growth Modification, with Special Reference to the Application of the “M” Block Apparatus

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Apstrakt

Uvod: „M” blok je aparat sa šraфом po Sanderu spada u grupu mobilnih, zubno nošenih funkcionalnih aparata. Sastoji se od posebnih delova za gornju i donju vilicu.

Cilj rada: Promenom prostornog položaja donje vilice „M” blok aparat dovodi do aktivacije miotatičnih refleksa, koji kroz duži vremenski period dovode do remodelacije i promene u pravcu rasta kondila, artikularne jame i porasta cele donje vilice.

Metodologija: Za svoje delovanje aparat koristi modifikaciju rasta. Indikacije za primenu „M” bloka su malokluzije II skeletne klase po Angle-u, u periodu pubertetskog ubrzanja rasta sa mandibularnim retrognatizmom, blagim maksilarnim prognatizmom, rast lica prednjom rotacijom, anteinklinacijom donje vilice, povećanim incizalnim razmakom, protruzijom gornjih sekutića i retruzijom donjih sekutića.

Kontraindikacije za terapijsku primenu „M” bloka su malokluzije II skeletne klase za nepravilnostima u vertikalnom pravcu (hiperdivergentni rast vilica), malokluzije III skeletne klase i skeletno otvoren zagrižaj.

Idealno vreme za početak terapije „M” blokom je godinu dana pre pubertetskog ubrzanja rasta. Na snimku šake, to je SH2 stadijum, a po Bačetićevoj analizi vratnih pršljenova je stadijum CS3. Kao i kod svih aparata koji koriste modifikaciju rasta, najvažnije je dobro uzeti konstrukcioni zagrižaj. Za brzu orijentaciju i ovdje važi pravilo 10.

Konstrukcioni zagrižaj za „M” blok podrazumeva:

- u sagitalnom pravcu ivični odnos sekutića, između sekutića treba da bude 2 mm voska, što istovremeno određuje vertikalno otvaranje.
- u transferzalnom pravcu treba da poklopimo sredinu gornje i donje vilice, a ne sredinu zubnih nizova tj. prenosimo odnos vilica iz fiziološkog mirovanja.

Delovi aparata: Aparat se sastoji iz posebnih delova za gornju i donju vilicu.

U ploči gornjeg dela aparata, nalazi se zavrtnj po Sanderu. On u sebi sadrži 2 metalna kraka, dužine od 13 do 16 mm, koji su u odnosu na okluzalnu ravan postavljeni pod uglom od 60 stepeni. Dužina tih heliksa mora da bude od 13 do 16 mm, jer na taj način obezbeđuje delovanje aparata i onda kada je fiziološko mirovanje povećano, tj. u toku sna.

U donjoj ploči, u njenom središnjem delu, nalazi se inklinirana ravan u akrilatu.

Abstract

Introduction: “M” block is an appliance with a screw according to Sander and it belongs to the group of mobile, dentally worn functional appliances. It consists of special parts for the upper and lower jaw.

The aims: By changing the spatial position of the lower jaw, the “M” block device leads to the activation of myotatic reflexes, which over a long period of time lead to remodeling and changes in the direction of growth of the condyle, articular fossa and growth of the entire lower jaw.

Methodology: The device uses growth modification for its action. Indications for the application of the M block are malocclusions of the II skeletal voice according to Angle, in the period of pubertal growth acceleration with mandibular retrognathism, mild maxillary prognathism, facial growth by anterior rotation, ante inclination of the lower jaw, increased incisal distance, protrusion of the upper incisors and retrusion of the lower incisors.

Contraindications for the therapeutic application of the “M” block are malocclusions of skeletal class II due to irregularities in the vertical direction (hyperdivergent growth of the jaws), malocclusions of skeletal class III, and skeletal open bite.

The ideal time to start the “M” block therapy is one year before the puberty growth spurt. On the hand scan, it is the SH2 stage, and according to Bačeti’s analysis of the cervical vertebrae, it is the CS3 stage. As with all devices that use growth modification, the most important thing is to take a good construction bite. For quick orientation, rule 10 applies here as well.

The design specification for the “M” block includes:

- In the sagittal direction, the edge relationship of the incisors, there should be 2mm of wax between the incisors, which at the same time determines the vertical opening.
- In the transferal direction, we should overlap the middle of the upper and lower jaw and not the middle of the tooth rows, i.e. we transfer the relationship of the jaws from physiological rest.

Appliance parts: The appliance consists of special parts for the upper and lower jaw.

In the plate of the upper part of the device, there is a Sander screw. It contains 2 metal arms, 13 to 16 mm long, which are placed at an angle of 60 degrees in relation to the occlusal plane. The length of these helixes must be 13-16 mm, because in this way it ensures the operation of the apparatus even when the physiological rest is increased, i.e. during sleep.

In the lower plate, in its central part, there is an inclined plane in acrylic.



Faze u terapiji: Postoje 2 faze, klinička i laboratorijska.

Klinička faza podrazumeva: anamnezu, klinički pregled, funkcionalno ispitivanje, uzimanje otisaka za studijske modele, radiografisanje i fotografisanje pacijenata. Na osnovu radiograma i analiza studijskih modela, postavlja se dijagnoza i određuje plan terapije. U drugoj poseti, uzima se konstrukcioni zagrižaj i otisci za radne modele.

Laboratorijska faza podrazumeva izradu studijskih modela i izradu aparata.

Efekti primene „M” bloka:

- skeletni: stimulisanje rasta mandibule, obuzdavanje rasta maksile,
- dentalni: retruzija gornjih sekutića, protruzija donjih sekutića,
- mišićni: uspostavljanje balansa između facijalnih i mastikatornih mišića.

Zaključak: U vertikalnom pravcu, „M” blok podstiče zadnju rotaciju, te je preporuka primene u slučajevima kada pacijent raste prednjom rotacijom.

Aparat je veoma komforan za nošenje iz razloga što se sastoji iz posebnih delova za gornju i donju vilicu. Dečak ga rado nosi, što nije slučaj sa monoblokom. Pored toga što koristi modifikaciju rasta, može u svom sastavu imati šrafove i opruge, pa sve što postizemo aktivnim aparatima (retruziju, protruziju i rešavanje teskobe) možemo postići i „M” blokom uz rešavanje sagitale.

Phases in therapy: There are 2 phases, clinical and laboratory.

The clinical phase includes anamnesis, clinical examination, functional examination, taking impressions for study models, radiography, and photography of patients. On the basis of radiographs and analysis of study models, a diagnosis is made and a therapy plan is determined. On the second visit, a construction bite and impressions are taken for working models.

The laboratory phase involves the creation of study models and the creation of apparatus.

Effects of applying the “M” block:

- Skeletal: stimulating the growth of the mandible, restraining the growth of the maxilla
- Dental: retrusion of upper incisors, protrusion of lower incisors
- Muscular: establishing a balance between facial and masticatory muscles

Conclusion: In the vertical direction, the “M” block encourages posterior rotation, so it is recommended for use in cases where the patient grows with anterior rotation.

The device is very comfortable to wear because it consists of special parts for the upper and lower jaw. Children like to wear it, which is not the case with the monobloc. In addition to using growth modification, it can have screws and springs in its composition, so everything we achieve with active devices/retrusion, protrusion, and resolution of anxiety/we can also achieve the “M block” with the resolution of the sagittal.