



# Primarna artroplastika kolena

## Primary Knee Arthroplasty

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### Apstrakt

Totalne artroplastike velikih zglobova su danas veoma efektivne i moderne hirurške intervencije koje oslobađaju pacijente bola i vraćaju funkciju zgloba. Sa starenjem populacije zahtevi za ovim intervencijama kontinuirano rastu. Totalna artroplastika zgloba je hirurška intervencija u kojoj se oštećeni zglob zamenjuje komponentama endoproteze, obično napravljenim od metala, keramike i veoma čvrste plastike. U savremenoj ortopediji artroplastike kuka i kolena su dve najučestalije i najuspešnije operacije.

U Nemačkoj artroplastika kolena je jedna od najučestalijih hirurških procedura. Većina pacijenata su stariji od 65 godina, ali se sve više zapaža i porast broja mlađih pacijenata koji zahtevaju ovu vrstu operacije.

Totalna artroplastika kolena bila je najučestalija hirurška intervencija u Americi u 2012. godini. Od 2003. do 2012. incidenca totalne artroplastike kolena porasla je od 145.4 do 223.0 pacijenata na 100 000 stanovnika, tj. 4.9% godišnje. Broj uređenih primarnih totalnih artroplastika kolena u 2016. u Americi iznosio je preko 500 000.

Najčešća indikacija za primarnom artroplastikom kolena je uznapredovali osteoarthritis kolena koji je udružen sa jakim bolovima, ograničenim pokretima, deformitetom i nestabilnosti kolena, što dovodi do značajnog gubitka kvaliteta života i nemogućnosti obavljanja osnovnih životnih funkcija. Teška oštećenja zgloba kolena kod hroničnog reumatoidnog artritisa su druga po učestalosti indikacija za primarnom artroplastikom kolena. Kod mlađih pacijenata, stanja nakon intraartikularnih preloma i povreda kolena operativno lečenih, a zbog rane postraumatske artroze i nestabilnosti kolena, mogu biti indikacija za primarnu artroplastiku kolena.

Danas su nam na raspolagju različiti tipovi totalnih endoproteza kolena. Njihov dizajn i savremeni materijali od kojih su naparavljene, omogućavaju dugi vek trajanja endoproteze kolena (od 15 do 20 godina) uz pun obim pokreta i stabilnost kolena. Totalne cementne endoproteze kolena su i dalje zlatni standard u primarnoj artroplastici kolena, praćene odličnim funkcionalnim rezultatom i održavanjem proteze do 20 godina. Kod mlađih pacijenata danas su na raspoloaganju i bescementne proteze kolena, kojima se izbegava problem trajanja proteze, a i čuva se kvalitet kosti za kasnije revizione operacije.

Najteža komplikacija koja prati primarnu artroplastiku kolena je svakako infekcija. Procenat infekcije u svetskoj literaturi nakon totalne artroplastike kolena kreće se od 2% do 3%. Lečenje infekcije nakon artroplastike kolena je izuzetno dugo i najčešće zahteva više dodatnih hirurških intervencija (ogromni ekonomski troškovi lečenja i prolongirana hospitalizacija). Sama komplikacija ostavlja katastrofalne posledice na zdravstveno stanje pacijenta. Primena antibiotske profilakse i

### Abstract

Total arthroplasties of large joints are today very effective and modern surgical interventions that relieve patients of pain and restore joint function. With the aging of the population, the demands for these interventions are continuously growing. Total joint arthroplasty is a surgical intervention in which the damaged joint is replaced with endoprosthetic components, usually made of metal, ceramic, and very hard plastic. In modern orthopedics, hip, and knee arthroplasty are two of the most frequent and successful operations.

In Germany, knee arthroplasty is one of the most common surgical procedures. The majority of patients are over 65 years of age, but an increase in the number of younger patients requiring this type of surgery is increasingly being noticed.

Total knee arthroplasty was the most common surgical procedure in America in 2012. From 2003 to 2012, the incidence of total knee arthroplasty increased from 145.4 to 223.0 patients per 100,000 inhabitants, i.e. 4.9% per year. The number of primary total knee arthroplasties performed in 2016 in America was over 500,000.

The most common indication for primary knee arthroplasty is advanced osteoarthritis of the knee, which is associated with severe pain, limited movements, deformity, and instability of the knee, which leads to a significant loss of quality of life and the inability to perform basic life functions. Severe damage to the knee joint in chronic rheumatoid arthritis is the second most frequent indication for primary knee arthroplasty. In younger patients, conditions after operatively treated intra-articular fractures and knee injuries, and due to early post-traumatic arthrosis and knee instability, may be an indication for primary knee arthroplasty.

Today, we have different types of total knee endoprostheses at our disposal. Their design and modern materials from which they are made, enable a long service life of the knee endoprosthesis (from 15 to 20 years) with a full range of motion and stability of the knee. Total cemented knee arthroplasties are still the gold standard in primary knee arthroplasty, followed by excellent functional results and maintenance of the prosthesis for up to 20 years. For younger patients, cementless knee prostheses are available today, which avoids the problem of the duration of the prosthesis, and preserves the quality of the bone for later revision surgeries.

The most serious complication following primary knee arthroplasty is certainly infection. The percentage of infection in the world literature after total knee arthroplasty ranges from 2% to 3%. Treatment of infection after knee arthroplasty is extremely long and usually requires several additional surgical interventions (huge economic costs of treatment and prolonged hospitalization). The complication itself has catastrophic con-



što bolji uslovi u operacionoj sali mogu smanjiti učestalost ove komplikacije.

Posebna pažnja u sklopu zdravstvene nege pacijenata koji se podvrgavaju primarnoj artroplastici kolena treba se obratiti na prevenciju infekcije i duboke venske tromboze i ranoj rehabilitaciji.

Savremene hirurške tehnike, kvalitetne totalne endoproteze kolena, adekvatna pre i postoperativna zdravstvena nega i rana rehabilitacija imaju za cilj da smanje postoperativne komplikacije nakon primarne artroplastike kolena i da što pre osposobe pacijenta za normalan i kvalitetan život.

sequences for the patient's health. The application of antibiotic prophylaxis and better conditions in the operating room can reduce the frequency of this complication.

Special attention in the health care of patients undergoing primary knee arthroplasty should be paid to the prevention of infection and deep vein thrombosis and early rehabilitation.

Modern surgical techniques, quality total knee endoprotheses, adequate pre- and post-operative health care, and early rehabilitation aim to reduce post-operative complications after primary knee arthroplasty and to enable the patient to lead a normal and quality life as soon as possible.