Internacionalni medicinski časopis iz oblasti biomedicinskih nauka International medical journal in the field of biomedical sciences
Medicinska reč **Medical Word**

APSTRAKT 1S 2020; 1(2): 49–49 ABSTRACT 1E

Savremene anti-aging procedure – mezoterapija u estetskoj dermatologiji

Modern anti-aging procedures - mesotherapy in aesthetic dermatology

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Apstrakt

Mezoterapija je minimalno invazivna procedura koja obuhvata multiple intradermalne ili subkutane ubode tankim iglama kojim se unose različite supstance u malim dozama direktno na obolelo mesto- u medicinske ili kozmetske svrhe. Otac mezoterapije je dr Pastor koji koji je započeo lečenje mezoterapijom 1952. god. Mezoterapija nije vrsta terapije za određeno oboljenje, već način davanja leka. Termin *mezo* odnosi se na mezoderm-središnji deo derma, gde se supstance i smeštaju, kao i *mezo* u značenju srednje doze (veće od homeopatske, a manje od alopatske doze).

Indikacije za mezoterapiju su: anti-aging, hiperpigmentacije, ožiljci-strije i ožiljci od akni, celulit, lokalizovane masne naslage, opadanje kose- alopecia androgenetica ieffluvium telogenes, terapija bola.

Kontraindikacije za mezoterapiju su: osobe mlađe od 18 godina, alergije na supstance koje se ubrizgavaju, trudnoća, laktacija, osobe na antikoagulantnoj terapiji, poremećaji koagulacije, infarkt miokarda, moždani udar (godinu dana nakon), DM tip I i insulin zavisni tip II, aktivna maligna bolest, ciroza jetre, bubrežna insuficijencija, autoimune bolesti (pemphigus vulgaris, psoriasis vulgaris), infekcije kože (HSV, impetigo).

Starenje je fiziološki multifaktorijalni proces koji zahvata sve organe, pa i kožu. Odlikuje se tankom, suvom i bledom kožom, kao i sa vidljivim borama i smanjenom elastičnošću. Na starenje utiču: UV zračenje, gubitak elastičnosti kože, ponovljeni pokreti mimične muskulature, redukcija volumena ili redistribucija masnog tkiva, resorpcija kostiju i hrskavice. Cilj mezoterapije je povećanje biosintenskog kapaciteta fibroblasta, stvaranje idealne fiziološke sredine za povećanu ćelijsku aktivnost- sintezu kolagena, elastina i hijaluronske kiseline. Mezoterapija se može izvoditi iglicama i špricom, ali i modernijim apartima kao što su Mesogun i Deromopen koji olakšavaju i omogućavaju primenu ove metode i od strane viših estetičara, ne samo dermatovenerologa i hirurga plastičara. Prednost mezoterapije u odnosu na druge metode biorejuvenilizacije se ogleda u dostupnosti i pristupačnosti opreme, brzoj obuci, i lakoj i brzoj promeni leka direktno na obolelo mesto.

Abstract

Mesotherapy is a minimally invasive procedure that involves multiple intradermal or subcutaneous injections with thin needles that intake various substances in small doses to the affected area. This procedure is conducted for medical or cosmetic purposes. The creator of mesotherapy is dr Pastor who started mesotherapy treatment in 1952. Mesotherapy is not a type of therapy for a certain disease, but a way of giving medicine. The word `meso` refers to the mesoderm — the central part of the dermis, where the substances are placed, and to the medium dose (higher than homeopathic and lower than allopathic dose).

Indications for mesotherapy are: anti-aging, hyperpigmentation, stretch marks and acne scars, cellulite, localized fat deposits, hair loss - alopecia androgenetica ieffluvium telogenes, pain therapy.

The contraindications to mesotherapy are: people under the age of 18, injectable substance allergies, pregnancy, lactation, anticoagulant therapy users, coagulation disorders, myocardial infarction, a stroke (one year after), Diabetes Mellitus type 1 and insulin dependent Diabetes type 2, an active malignant disease, a liver cirrhosis, kidney failure, autoimmune diseases (pemphigus vulgaris, psoriasis vulgaris), skin infections (HSV, impetigo).

Aging is physiological multifactorial process that affects all organs, including the skin. It is characterized by thin, dry and pale skin, as well as visible wrinkles and reduced elasticity. It is affected by: UV radiation, the loss of skin elasticity, repeated mimic muscle movements, reduction of the volume, adipose tissue redistribution, resorption of bones and cartilage. The aims of mesotherapy are to increase the capacity of fibroblast, create an ideal environment for physiological increased cellular activity- the synthesis of collagen, elastin and hyaluronic acid. Mesotherapy can be performed with needles and syringe but also with more innovative devices such as Mesogun and Deromopen which facilitate and enable the the use this method by the senior aestheticians, not only dermatovenerologists and plastic surgeons. The advantage of mesotherapy in relation to other methods of juvenization is reflected in the availability and accessibility of equipment, fast training, and easy and fast change of the drug directly to the affected area.

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APSTRAKT 2S 2020; 1(2): 50–51 ABSTRACT 2E

Sindrom izgaranja u službama dijalize – faktori rizika, manifestacije i posledice

Burnout syndrome in dialysis services, risk factors, manifestations and consequences

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Apstrakt

Fenomen sagorevanja na poslu je prvi put opisan šezdesetih godina prošlog veka, a od 2019. godine sindrom izgaranja na radnom mestu (engl. *burnout syndrome*) uvršćen je u 11. reviziju Međunarodne klasifikacije bolesti Svetske zdravstvene organizacije čime je problem aktuelizovan. Ovaj sindrom predstavlja odloženu reakciju na hronične stresne situacije na poslu koju karakterišu emocionalna iscrpljenost, doživljaj cinizma – depersonalizacije i udaljenosti od posla, i doživljaj nedovoljne efikasnosti u radu. Emocionalna iscrpljenost se manifestuje nesposobnošću da se osoba emocionalno uključi u radne zadatke usled potpunog nedostatka energije i iscrpljenosti emocionalnih i fizičkih resursa. Komponentu depersonalizacije karakteriše zauzimanje distanciranog stava, razvijanje ravnodušnosti, ili čak negativnih stavova i osećanja prema osobama sa kojima ili za koje se radi. Doživljaj nedovoljne efikasnosti, odnosno smanjen osećaj ličnog postignuća, manifestuje se kao sklonost zaposlenog da negativno procenjuje sopstvene mogućnosti i sposobnosti da obavlja radne zadatke, ili izostanak zadovoljstva postignutim rezultatima Savremeni način života i hronična izloženost stresu doveli su do velike rasprostranjenosti ovog sindroma. Pored stresa, ključni činioci za njegov nastanak su i nesrazmera između obima posla i mogućnosti kontrole, kao i između uloženog napora i ostvarene nagrade. Modulišući faktori su: nerealnoveliki obim i loša organizacija posla, veliki broj radnih sati, nedovoljna kvalifikovanost, kraći radni staž, neadekvatna supervizija, nedostatak lične motivacije, previsoka očekivanja, ukidanje beneficija ili neispunjavanje ugovornih obaveza poslodavca, promena vlasnika ili rukovodioca organizacije, smanjenje broja radnika; ali i lični faktori kao što su starost, pol, zdravstveno stanje i sposobnost prilagođavanja.

Posebno visok rizik za pojavu izgaranja nose zanimanja koja podrazumevaju rad sa ljudima, naročito sa osobama sa posebnim potrebama, bolesnim, decom i socijalno ugroženim, zatim profesije koje nose veliku odgovornost, zahtevaju visoku preciznost, podrazumevaju izloženost štetnim uticajima, socijalnom neprihvatanju ili opasnosti po život, kao i poslovi koji zahtevaju rad u smenama ili sa konstantnim kratkim rokovima.

Posledice sindroma izgaranja se odražavaju kako na samog zaposlenog (pojava cinizma, negativizma i mrzovolje, preosetljivosti, razdražljivosti, gubitak interesovanja i motivacije, pad samopouzdanja, povlačenje u sebe, doživljaj bespomoćnosti, osećaj da se ne dobija odgovarajuća podrška, hronični zamor, malaksalost, bol u leđima, glavobolje i drugi hronični neodređeni

Abstract

The burnout phenomenon was first described in the 1960s of the 20th century, and in 2019 this syndrome was involved in the 11th revision of the International Classification of Diseases of the World Health Organization, which made the problem more noticeable. This syndrome is a delayed reaction to chronic stressful situations at work, which is characterized by emotional exhaustion, the experience of cynicism - depersonalization and distance from work, and the experience of insufficient efficiency at work. Emotional exhaustion is manifested by the inability of a person to get emotionally involved in work tasks due to a complete lack of energy and emotional and physical weakness. The component of depersonalization is characterized by reserved behavior, the development of apathy, or negative attitudes or feelings towards the people from the working environment. The experience of insufficient efficiency, and a reduced sense of personal achievement, is manifested as the tendency of the employee to negatively assess their own capabilities and abilities to perform work tasks or lack of satisfaction with the results achieved. Modern way of life and chronic stress exposure led to high prevalence of this syndrome. In addition to stress, the key factors for its occurrence are the disproportion between the scope of workload and the ability to control it, as well as the disproportion between the effort and the reward. Modulating factors are unrealistic volume and poor work organization, a large number of working hours, insufficient qualification, shorter work experience, inadequate supervision, lack of personal motivation, high expectations, termination of benefits or non-fulfillment of contractual obligations of the employer, change of owner or manager, reduction of employees; but also personal factors such as age, gender, health status and the ability to adapt. Occupations that involve working with people, especially people with special needs, the sick, children, and the socially vulnerable, are particularly high risk of burnout, as well as occupations that carry great responsibility require high precision, exposure to harmful influences, social rejection, or danger to life, as well as jobs that require work in shifts or with constant short deadlines.

The consequences of burnout syndrome impact not only the employee (the appearance of cynicism, negativism and grumpiness, hypersensitivity, irritability, loss of interest and motivation, loss of self-confidence, withdrawal, helplessness, feeling of not getting adequate support, chronic fatigue, weakness, back pain, headaches and other chronic indeterminate pains, gastrointestinal problems, insomnia, long duration of the so-called. "minor diseases"; to serious health problems - sudden

bolovi, gastrointestinalne tegobe, nesanica, dugo trajanje tzv. „minornih oboljenja"; do ozbiljnih zdravstvenih problema – nagle promene telesne mase, metabolički sindrom, visok krvni pritisak i kardiovaskularne bolesti), tako i na kolektiv (učestalo odsustvovanje sa posla, smanjena radna efikasnost, smanjeno lično angažovanje, smanjena produktivnost, veća mogućnost stručne greške, učestalo napuštanje posla, otuđenje, učestali sukobi sa saradnicima, gubitak poverenja, nesposobnost prihvatanja kritike, nametanje vlastitih sudova, nerazumevanje nadređenih).

Rad u službi hemodijalize nosi brojne rizike za nastanak sindroma izgaranja na poslu jer podrazumeva neposredni i prolongirani kontakt sve starijim, zahtevnijim i sve manje komplijantnim teško obolelim osobama sa sve brojnijim komplikacijama, kontaktiranje sa njihovim porodicama, neophodan visok stepen koncentracije pri rukovanju preciznim dijaliznim aparatima, monotonost posla, rad u smenama, etičke dileme, manjak kontrole i izlaganje riziku sopstvenog zdravlja.

U našoj zemlji je za sada sprovedeno samo jedno istraživanje o zastupljenosti sindroma izgaranja među zdravstvenim radnicima u službi hemodijalize. Rezultati ovog istraživanja mogli bi da značajno pomognu u kreiranju strategija za prevenciju, umanjivanje prisustva i ublažavanje posledica izgaranja.

weight changes, metabolic syndrome, high blood pressure, and cardiovascular disease) but also the entire collective (frequent absences from work reduced work efficiency, reduced personal engagement, reduced productivity, the greater possibility of professional error, frequent leaving the job, alienation, frequent conflicts with associates, loss of trust, inability to accept criticism, imposing one's own judgments, misunderstanding of superiors).

Working in the hemodialysis service carries numerous risks for the development of burnout syndrome at work because it implies direct and prolonged contact with older, more demanding, and less compliant seriously ill people with increasing complications, contact with their families, the necessary high degree of concentration when handling precision dialysis machines. job monotony, shift work, ethical dilemmas, lack of control, and risk to one's own health.

So far, only one research has been conducted in our country on the prevalence of burnout syndrome among health workers in the hemodialysis service. The results of this research could significantly help in creating strategies to prevent, reduce the presence, and mitigate the effects of burnout.

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APSTRAKT 3S 2020; 1(2): 52–53 ABSTRACT 3E

Prevencija infekcija izazvanih humanim papiloma virusima i raka grlića materice

Prevention of cervical cancer and infections caused by human papilloma viruses

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Apstrakt

Infekcija HPV (Humani papiloma virus) virusima danas je najčešće dijagnostikovana polno prenosiva bolest. Istraživanja pokazuju da među ženama sa urednim citološkim nalazom širom sveta prevalencija HPV infekcije iznosi 11,7%. Rezultati su različiti, pa tako u regionu podsaharske Afrike iznosi 24,0%, Latinske Amerike i Kariba 14,2% i jugoistočne Azije 14,0%. To je vrlo opasan i infektivan virus. Smatra se da ih ima preko 200 genotipova, koji se svrstavaju u tri grupe, nisko, srednje i visoko rizični. Oko 40 genotipova HPV-a mogu da inficiraju genitalne organe. Visoko rizični genotipovi moga da izazovu karcinom grlića materice, najčešći izazivači su genotipovi 16 i 18, a odgovorni su za oko 80% slučajeva raka grlića materice. Manji broj je izazvan genotipovima 33, 35, 39 i 52.

Papiloma virusi pripadaju porodici Papillomaviridae, to su DNA virusi, i imaju raznolik raspon domaćina i kod ljudi i kod životinja. Kada virus uđe u ćeliju HPV infekcija može imati tri različite forme: latentnu, koja se može otkriti jedino HPV tipizacijom, subkliničku formu, koju je moguće identifikovati kolposkopijom i eksfolijativnom citologijom i kliničku formu. HPV infekcija prema tipu može biti latentna gde nema replikacije virusa i produkcije kompletnih infektivnih čestica, dok se produktivna može razvijati u dva pravca, kao akutna i kao prezistentna infekcija.

HPV se prenosi seksualnim putem, mada se može preneti i u toku porođaja sa majke na dete, HPV može inficirati sluzokožu gornjih disajnih puteva i konjuktive oka, sato kod dece u uzrastu od 10 do 15 godina mogu izazvati pojavu laringealnih polipa. Humani papiloma virus je takođe odgovoran za više od 90% slučajeva raka završnog dela debelog creva, 71% slučajeva raka genitalnih organa kod oba pola i za 72% slučajeva raka usne duplje i ždrela.

Prema podacima Registra za rak Instituta za javno zdravlje Srbije „Dr Milan Jovanović Batut", svake godine se u proseku registruju 1244 novoobolele žene od raka grlića materice. Svake godine u proseku 482 žene izgube život od ove vrste raka. Srbija se i dalje nalazi u grupi evropskih zemalja sa najvišim stopama obolevanja i umiranja od raka grlića materice, na osnovu procena Međunarodne agencije za istraživanje raka (IARC) i Evropske mreže registara za rak (ENCR).

Faktori rizika za nastanak raka grlića materice su: žene koje su seksualnu aktivnost započele pre 16 godine, žene koje su imale veći broj seksualnih partnera, promiskuitetan partner, nezaštićeni polni odnosi, žene koje u anamnezi imaju seksualno prenosive bolesti ili genitalne bradavice, osobe kod kojih postoji

Abstract

HPV (Human Papilloma Virus) virus infection is the most commonly diagnosed sexually transmitted disease today. Studies show that among women with a regular cytological finding worldwide, the prevalence of HPV infection is 11.7%. The results are different, so in the region of sub-Saharan Africa, it is 24.0%, Latin America, and the Caribbean 14.2% and Southeast Asia 14.0%. It is a very dangerous and infectious virus. It is believed that there are over 200 genotypes, which are classified into three groups, low, medium, and high risk. About 40 HPV genotypes can infect the genitals. High-risk genotypes can cause cervical cancer, the most common causes are genotypes 16 and 18, and they are responsible for about 80% of cases of cervical cancer. A smaller number was caused by genotypes 33, 35, 39, and 52.

Papillomaviruses belong to the Papillomaviridae family, they are DNA viruses and have a diverse range of hosts in both humans and animals. When a virus enters a cell, HPV infection can take three different forms: latent, which can only be detected by HPV typing, subclinical form, which can be identified by colposcopy and exfoliative cytology, and clinical form. HPV infection by type can be latent where there is no replication of the virus and production of complete infectious particles, while productive can develop in two directions, as acute and as a persistent infection.

HPV is sexually transmitted, although it can be transmitted from mother to child during childbirth, HPV can infect the mucous membranes of the upper respiratory tract and conjunctiva of the eye, which can cause laryngeal polyps in children aged 10 to 15. The human papilloma virus is also responsible for more than 90% of cases of end-stage colon cancer, 71% of cases of genital cancer in both sexes and 72% of cases of cancer of the oral cavity and pharynx.

According to the data of Institute of Public Health of Serbia „Dr Milan Jovanović Batut", yearly an average of 1244 newly diagnosed women with cervical cancer are registered. Every year, an average of 482 women lose their lives from this type of cancer. Serbia is still in the group of European countries with the highest rates of morbidity and mortality from cervical cancer, based on estimates by the International Agency for Research on Cancer (IARC) and the European Network of Cancer Registries (ENCR).

Risk factors for cervical cancer are: women who start being sexually active before the age of 16, women who have many sexual partners, a promiscuous partner, unprotected sex, women with a history of sexually transmitted diseases or genital

odsustvo imunog odgovora, veći broj porođaja, dugotrajno uzimanje oralnih kontraceptivnih sredstava, loš socijalno-ekonomski status, pozitivna porodična anamneza, izostanak redovnih citoloških pregleda, pušenje. Odgovor imunološkog sistema na HPV infekciju je kompleksan i još uvek nedovoljno i potpuno objašnjen.

Prevencija karcinoma grlića materice se može ostvariti na primarnom, sekundarnom i tercijarnom nivou. Primarna prevencija podrazumeva mere sprečavanja infekcije HPV (zdravstvena edukacija, vakcinacija). Sekundarna prevencija uključuje skrining (rano otkrivanje asimptomatskih oblika bolesti). Tercijarna prevencija je lečenje premalignih lezija, čime se sprečava njihova progresija do invazivnog karcinoma grlića materice.

warts, people with there is a lack of immune response, a higher number of births, long-term use of oral contraceptives, poor socioeconomic status, a positive family history, lack of regular cytological examinations, smoking. The response of the immune system to HPV infection is complex and still insufficiently and incompletely explained.

Prevention of cervical cancer can be achieved at the primary, secondary and tertiary levels. Primary prevention includes measures to prevent HPV infection (health education, vaccination). Secondary prevention includes screening (early detection of asymptomatic forms of the disease). Tertiary prevention is the treatment of premalignant lesions, which prevents their progression to invasive cervical cancer.

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APSTRAKT 4S 2020; 1(2): 54–55 ABSTRACT 4E

Uloga medicinske sestre u savremenom zdravstvu – gde smo, a gde treba da budemo

Role of a nurse in modern healthcare - where we are and where we should be

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Apstrakt

Uvod: Osnovno ljudsko pravo jeste zadovoljenje svojih potreba - održavanje zdravlja, emocionalna podrška i kontinuitet nege. Sestre su danas spremne da postanu akademski i praktično sposobne da definišu i udovolje tim ljudskim potrebama, koje su prevazišle vreme i tehnologiju.

Cilj: Prikazati današnje mogućnosti za integrisanjem stečenog znanja u obrazovanju medicinskih sestara utemeljeno na dokazima kroz kritičko mišljenje i realnu primenu u svakodnevnoj praksi.

Metoda rada: Sistematski pregled kvantitativnih studija objavljenih u Konzorcijumu biblioteka Srbije za objedinjenu nabavku (KOBSON).

Rezultati: Zadatak nosioca politike i uređenja društva je povećanje visokoobrazovanih u sestrinstvu suprotstavljajući se stereotipima i uzdižući struku. Da bismo povećali razumevanje i uvažavanje vrednosti sestrinstva, moramo promovisati realne slike medicinskih sestara i njihov ogroman doprinos zdravstvu. Ponekad se stepen uloge medicinske sestre posmatra kroz uobičajene toalete u krevetu, nameštanja posteljine, dodira ruke, stavljanja hladnih obloga, različitih merenja i aplikovanja terapije – ili slepog izvršavanja naloga lekara i potreba pacijenata. U Republici Srbiji postoji produkcija medicinskih sestara sa akademskim obrazovanjem i bilo bi potrebno proširiti kompetencije i priznati koeficijent. Razvojem novih tehnologija i medicinskih aparata, medicinske sestre se u svakodnevnom radu susreću sa novinama, udruženim komorbiditetima i neophodno je da se obrazuju a ne da se obučavaju na kratkim obukama. Osim obaveznog stručnog usavršavanja, potrebna je motivisanost medicinskih sestara za celoživotno obrazovanje radi napredovanja u radu i struci. Bez obzira na sve, medicinska sestra se i dalje bori sa prekomernim radom, nedostatkom priznanja, nedovoljnom platom i nezavisno da li radi osam ili 12 sati, takođe mora da podučava, pojačava, objašnjava, nadgleda, komforuje, vodi evidenciju i neguje poverenje pacijenata. Ovo je odličan primer potrebe za timom koji se uzajamno podržava i radi u najboljem interesu pacijenata. Sestrinstvo se stalno razvija a medicinske sestre zauzimaju svoje mesto kao posebni članovi zdravstvenog tima. Veliki deo svog radnog vremena provode u edukaciji pacijenata, emocionalnoj podršci i radu sa članovima pacijentove porodice kako bi im pomogle da shvate kroz šta pacijent prolazi i kako najbolje mogu da pomognu. Budući da je medicinska sestra sa pacijentom 24 sata dnevno, ona je u jedinstvenom položaju da posmatra njegove potrebe, bilo da su fizičke, emotivne ili duhovne i upozorava odgovarajuće članove zdravstvenog tima. Medicinske sestre imaju najodgovorniju

Abstract

Introduction: The basic human right is to satisfy one's needs - maintaining health, emotional support, and the continuity of care. Today, nurses are ready to become academically and practically capable of defining and meeting those human needs, which have surpassed time and technology.

Aims: To present today's possibilities for the integration of the acquired knowledge in the education of nurses based on the evidence through critical thinking and realistic application in everyday practice.

Methods of the research: Systematic review of quantitative studies published in the Consortium of Libraries of Serbia for unified procurement (KOBSON).

Results: The task of the bearers of politics and the organization of society is to increase the number of highly educated nurses by opposing stereotypes and raising the profession. To increase understanding and appreciation of the value of nursing, we need to promote realistic images of nurses and their huge contribution to healthcare. Sometimes the role of a nurse is observed through maintaining a patients` hygiene in bed, bed making, touch of a hand, applying cold compresses, various measurements and applying therapy - or execution of doctor's orders and patients' needs. In the Republic of Serbia, there is a production of nurses with academic education and it would be necessary to expand competencies and recognize the coefficient. With the development of new technologies and medical devices, nurses encounter innovations, associated comorbidities in their daily work, and it is necessary for them to be educated and not to be trained in a short training. In addition to mandatory professional development, nurses need to be motivated for lifelong learning in order to advance their careers. Nonetheless, nurses are still struggling with overwork, lack of recognition, insufficient pay, and whether they work eight or twelve hours, they also must teach, reinforce, explain, supervise, comfort, keep records, and nurture patients` trust. This is a great example of the need for a team that is mutually supportive and works in the best interest of patients. Nursing is constantly evolving and nurses are taking their place as special members of the healthcare team. They spend much of their working time educating patients, providing emotional support, and working with the patients` family members in order to help them understand what the patient is going through and how they can best help. Because the nurse is with the patient 24 hours a day, she can easily observe his needs, whether they are physical, emotional, or spiritual, and warn the members of the health team. Nurses have the most responsible role in providing

ulogu u pružnjua kvalitetne nege i životnog tretmana u zdravstvu. Raznolika obrazovna i edukovana sestrinska radna snaga pomaže povećanju pristupa kvalitetnim zdravstvenim uslugama, rešenju zdravstvenih stanja koja se mogu sprečiti i rešavanju socijalne odrednice zdravlja kao i aktivnu ulogu u podsticanju zdravstvene pismenosti. Promovisanje realne slike o medicinskim sestrama i sve veća raznolikost u struci moraju biti namerni kako bi se pomoglo kreatorima politike da postignu i unaprede karijeru u sestrinstvu. Takođe, moramo razgovarati o finansijskoj pomoći i zagovarati razvojne programe koji uključuju bespovratna sredstva za obrazovanje i usavršavanje sestrinstva.

Zaključak: Prevazilaženje poteškoća u nedostataku vremena, nedostataku sestrinskog osoblja kao i nedostatak visokoobrazovanih sestara treba sprovoditi sa ciljem pružanja sigurnije i efikasnije sestrinske nege. Velika zastupljenost visoko obrazovanih u sestrinstvu može da poboljša sve napore na povezivanju rezultata utemeljenih i primenjenih na istraživanju sa svakodnevnom praksom kao jedan od ključnih preduslova poboljšanja sestrinskog položaja i rada.

quality care and life treatment in health care. A diverse and educated nursing workforce affects the enhancement of the access to quality health services, address preventable health conditions, and the social determinants of health. They also play an active role in promoting health literacy. Promoting a realistic picture of nurses and increasing diversity in the profession must be intentional to help policymakers achieve and advance careers in nursing. We also need to discuss financial assistance and advocate for development programs that include grants for nursing education and training.

Conclusion: Overcoming difficulties in the lack of time, lack of nursing staff as well as lack of highly educated nurses should be conducted with the aim of providing safer and more efficient nursing care. The high representation of the highly educated in nursing can enhance all the efforts to link research-based and applied results with everyday practice as one of the key preconditions for improving nursing position and work.

Internacionalni medicinski časopis iz oblasti biomedicinskih nauka International medical journal in the field of biomedical sciences
Medicinska reč **Medical Word**

APSTRAKT 5S 2020; 1(2): 56–56 ABSTRACT 5E

Rizik od pada kod oftalmoloških pacijenata, potencijalna sestrinska dijagnoza u procesu zdravstvene nege

Fall risk among ophtalmic patients, potential nursing diagnosis in the healthcare process

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Apstrakt

Oblast bezbednost pacijenta je nova u našim uslovima, a od jula 2007. godine prvi put se prate pokazatelji kvaliteta u ovoj oblasti. Veće vrednosti neželjenih događaja u nekim bolnicama mogu ukazivati na bolje registrovanje neželjenih događaja u odnosu na druge bolnice, a ne samo na lošiji kvalitet. Bolnice treba da analiziraju vrstu i učestalost registrovanih neželjenih događaja, uzroke koji do njih dovode i preduzimaju mere za sprečavanje neželjenih događaja.

Sestrinska dijagnoza je specifičan zaključak o reagovanju pojedinca, porodice ili zajednice na aktuelan ili potencijalni zdravstveni problem koji osoblje službe zdravstvene nege može samostalno da spreči, ublaži ili reši. Sestrinska dijagnoza treba da bude iskazana u okviru zakonskih kompetencija medicinske sestre. Rizik od pada definiše se kao „stanje povećane osetljivosti za pad i nastanak telesnih povreda". Pad se definiše i kao medicinska greška koja predstavlja „neuspeh ili neizvršavanje planiranih postupaka kako je nameravano / npr. greška u izvođenju/ ili „primena pogrešnog plana u postizanju cilja, npr. greška u planiranju. Zajedničke komisije za akreditaciju zdravstvenih ustanova mogu otkloniti blagovremenom procenom rizika primenom navedenih skala kod svih hospitalizovanih pacijenata i implementacijom programa prevencije.

Bezbednost pacijenata je proces u kome zdravstvena ustanova nastoji da pružanje usluga bude bezbedno za pacijente. Taj proces obuhvata: procenu rizika (identifikaciju i upravljanje rizicima po pacijente), izveštavanje i analizu incidenata koji su ugrozili bezbednost pacijenata i kapacitete da se uči na iskustvu kao i primenu rešenja koji će smanjiti da se incidenti ponove.

Cilj rada je dokazati značaj uloge medicinske sestre u zdravstvenoj nezi i bezbednosti pacijenta.

Rezultati istraživanja pokazuju da u svetu oko 10% pacijenata u bolnicama ima iskustva sa incidentima koji su ugrožavali njihovu bezbednost i da je polovina tih incidenata mogla biti prevenirana. Istraživanja takođe procenjuju da je 1% tih incidenata doprinelo smrtnom ishodu lečenih. Iako su ova istraživanja usmerena na akutna oboljenja i stanja, slični su faktori koji dovode do incidenata i u drugim oblastima medicinske nege i lečenja.

Abstract

The area of patient safety is new in our conditions, and since July 2007, quality indicators in this area have been monitored. Higher values of adverse events in some hospitals may indicate better registration of adverse events compared to other hospitals, and not only poorer quality. Hospitals should analyze the type and frequency of registered adverse events, the causes that lead to them, and take measures to prevent adverse events.

A nursing diagnosis is a specific conclusion about the reaction of an individual, family, or community to a current or potential health problem that the health care staff can independently prevent, mitigate, or solve. The nursing diagnosis should be expressed within the legal competencies of the nurse. The fall risk is defined as "a state of increased sensitivity to falling and the occurrence of personal injuries." A fall is also defined as a medical error that represents "failure or non-execution of planned procedures as intended /e.g. error in execution and/ or "application of the wrong plan in achieving the goal .e.g. planning error. Joint commissions for accreditation of health care institutions can be eliminated by timely risk assessment by applying the mentioned scales in all hospitalized patients and by implementing prevention programs.

Patient safety is a process in which a healthcare institution strives to make the provision of services safe for patients. This process includes risk assessment (identification and management of risks for patients), reporting and analysis of incidents that have endangered the patient`s safety, and the capacity to learn from experience, as well as the application of solutions that will reduce the recurrence of incidents.

The aim of the study is to prove the importance of the role of the nurse in health care and patient safety.

The results of the research show that around 10% of patients in hospitals in the world have experiences with incidents that endangered their safety and half of these incidents could have been prevented. The research also estimates that 1% of these incidents contributed to the death of those treated. Although these studies focus on acute diseases and conditions, the factors that lead to incidents are similar in other areas of medical care and treatment.

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APSTRAKT 6S 2020; 1(2): 57–58 ABSTRACT 6E

Kardiopulmocerebralna reanimacija odraslih – pristup pacijentu u bolničkim uslovima

Cardiopulmocerebral resuscitation (CPR) in adults – the approach to a patient in hospital conditions

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Apstrakt

Uvod: Kardiopulmocerebralna reanimacija (KPCR) je skup mera i postupaka koje preduzimamo kada pacijent ne diše i/ili nema srčanu radnju. Najvažnije je rano prepoznavanje potrebe za KPCR-om i započinjanje intezivnih mera po protokolima i standardima.

Cilj: Sagledavanje najnovijih preporuka za kardiopulmocerebralnu reanimaciju iz februara 2015. godine sa ciljem obnavljanja veština i znanja iz ove oblasti.

Metoda rada: Retrospektivna analiza literature i kliničko iskustvo tokom svakodnevnog rada. Glavni pojmovi pretrage: kardiopulmocerebralna reanimacija, jedinica intezivnog lečenja, bolnički pacijenti, odrasli pacijenti. Pretraga obavljena kroz PubMed, Medline i elektronske časopise dostupne na KOBSON-u.

Rezultati: Kada se govori o pristupu pacijentu u bolničkim uslovima i primeni adekvatnih mera reanimacije, neophodno je preduzimanje mera od strane prisutnog osoblja sa pozivanjem tima za reanimaciju i davanje adekvatnih podataka vođi tima koji daje smernice do pristizanja tima do pacijenta. Takođe mora se napomenuti da kada se pacijent sa terena dovozi u bolnicu pod merama reanimacije neophodno je davanje najavljivanje pacijenta reanimacionom timu i davanje adekvatnih podataka radi pripreme uslova za nastavak mera reanimacije.

U bolničkim uslovima mere BLS (basic life support) se ne mogu jasno odvojiti od mera ALS (advance life support) ali i ovde je osnov što kraće vreme za preduzimanje neophodnih mera reanimacije. Iz ovog razloga težnja treba biti na stalnom obnavljanju postojećih znanja, na standardizovanju protokola i smernica reanimacije prema svetskim standardima za celu bolnicu i svako odeljenje u bolnici, sadržaj lekova, opreme za reanimaciju kao i njihovo mesto moraju biti jasno određeni i definisani i svakodnevno proveravani i kontrolisani.

Na procenu opšteg stanja pacijenta ne treba biti utrošeno više od 10sec, primarni znaci akutnog srčanog zastoja su: gubitak svesti, prestanak spontanog disanja, prestanak cirkulacije tj. izostanak pulsa nad magistralnim krvnim sudovima. Najvažnije je poštovanje AREST VREMENA – vreme koje prolazi od nastupanja srčanog zastoja do preduzimanja mera reanimacije. Nakon 3-5 minuta od nastupanja srčanog zastoja dolazi do nepovratnog (ireverzibilnog) oštećenja moždanih ćelija.

Mere reanimacije i redosled postupaka radi lakšeg pamćenja definišu se sledećom mnemotehničkom formulom CAB DEF GHI prema najnovijim smernicama i protokolima. Značenje svakog pojedinačnog obeležja je sledeće: C (circulation),

Abstract

Introduction: Cardiopulmocerebral resuscitation (CPR) is a set of measures and procedures that we take when the patient is not breathing or their heart stops beating. The most important is the early recognition of the need for CPR and the initiation of intensive measures according to protocols and standards.

Aims: The review of new reccomendations for cardiopulmocerebral resuscitation from February 2015 with the aim of renewing skills and knowledge in this particular area.

Methods: Retrospective analysis of literature and clinical experience during everyday work. Main search terms: cardiopulmocerebral resuscitation, intensive care unit, hospital patients, adult patients. Search is done through PubMed, Medline, and e-magazines available on KOBSON.

Results: When it comes to access to the patient in a hospital setting and application of adequate resuscitation measures, the present staff must take measures by calling the resuscitation team and provide adequate information to the team leader who provides guidance until the team arrives at the patient. It must also be noted that when a patient is brought from the field to the hospital under resuscitation measures, it is necessary to announce the patient to the resuscitation team and provide adequate data to prepare the conditions for the continuation of resuscitation measures. In hospital conditions, the BLS measures (basic life support) cannot be clearly separated from the ALS measures (advance life support), but even here the basis is the shortest possible time to take the necessary resuscitation measures. For this reason, it is necessary to constantly update the existing knowledge, to standardize resuscitation protocols and guidelines according to world standards for the entire hospital and each ward in the hospital, medications, resuscitation equipment, and their place must be clearly defined and daily controlled.

No more than 10 seconds should be spent on the assessment of the general condition of the patient, the primary signs of acute cardiac arrest are the loss of consciousness, the cessation of spontaneous breathing, the cessation of circulation - ie., the absence of pulse over the main blood vessels. The most important thing is to respect arrest time - the time that passes from the onset of cardiac arrest to taking resuscitation measures. After 3-5 minutes from the onset of cardiac arrest, there is irreversible damage to brain cells. The resuscitation measures and the sequence of procedures for easier memory are defined by the following mnemonic formula CAB DEF GHI according to the latest guidelines and protocols. The meaning of each individual feature is as follows: C (circulation), A (airway), B (breathing),

A (airway), B (breathing), D (drugs and fluid), E (EKG), F (fibrilation), GHI (GCS, High mental activity, intensive care).

Zaključak: Poznavanje mera reanimacije od strane zdravstvenih radnika uz stalnu edukaciju i praćenje novina osnov su uspešnog rada. Ističemo značaj obaveznog poznavanja postojeće opreme, mesta gde se ista nalazi i načina upotrebe sa akcentom na značaj rane defibrilacije tj mesta gde je defibrilator, obučenosti za korišćenje i stalne provere ispravnosti aparata.

D (drugs and fluid), E (ECG), F (fibrillation), GHI (GCS, High mental activity, intensive care).

Conclusion: Knowing resuscitation measures by health workers with constant education and monitoring of innovations is the basis of successful work. We emphasize the importance of mandatory knowledge of the existing equipment, the place where it is located, and the method of use with an emphasis on the importance of early defibrillation - ie. the place where the defibrillator is, training for use and constant checking of the correctness of the device.

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APSTRAKT 7S 2020; 1(2): 59–59 ABSTRACT 7E

Sevofluran – klinički značaj
Clinical signifacance of Sevoflurane

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Apstrakt

Sevofluran je nezapaljiva, neeksplozivna i isparljiva inhalaciona tečnost koja se pacijentu iporučuje preko isparivača, i koristi se za inhalacionu anesteziju kao halogenovani inhalacioni anestetik. Sevofluran je otkriven 1971. a od 1990 je u Japanu uveden u kliničku praksu. Od 1995 se koristi u Americi kao i u Evropi. Kod nas se koristi u svakodnevnoj praksi od početka 2000 –tih godina. Zbog svojih povoljnih fizičkih karakteristika Sevofluran je postao jedan od inhalacionih anestetika koji se najčešće upotrebljava u savremenoj kliničkoj praksi.

Osobine Sevoflurana su:
1. bistra bezbojna, nekorozivna, nezapaljiva, neeksplozivna, lako isparljiva tečnost,
2. niskog koeficijenta rastvorljivosti krv/gas,
3. sladunjav mirišljav gas,
4. ne deluje nadražajno,
5. deluje bronhodilatatorno,
6. ima kardioprotektivno dejstvo,
7. koronarni vazodilatator.

Sevofluran podleže 3–5%-doznoj zavisnoj biotransformaciji u jetri, do osnovnog metabolita heksafluoroisopropanol, neorganskog fluoridnog jona i CO_2. Stepen degradacije raste sa dužinom anestezije.

Dejstvo Sevoflurana na organske sisteme je sledeće:
1. Snižava metaboličku potrošnju kiseonika u nervnim ćelijama što izaziva depresiju EEG-a. Povećava protok kroz CNS (dozno zavisno), povećava blago intrakranijalni pritisak u vrednostima preko 1 MAC-a,
2. Dozno zavisno snižava arterijski pritisak i sistemski vaskularni otpor uz minimalni efekat na minutni srčani volumen. Smanjuje kontraktilnost za oko 25% u dozi od 1 MAC-a,
3. Ima izraženo bronhodilatatorno dejstvo. Izaziva respiratornu depresiju ali daleko manje od ostalih anestetika,
4. Izaziva realaksaciju skeletnih mišića i potencira dejstvo mišićnih relaksanata,
5. Ima neznatan uticaj na metabolizam jetre kao i na protok kroz bubrege, te su i oštećenja jetre veome retka,
6. U dozi većoj od 1 MAC-a povećava rizik od atonije uterusa te povećava rizik od povećanog gubitka krvi kod carskih rezova u opštoj anesteziji.

Kontraindikacije za upotrebu sevoflurana su: poznata preosetljivost na sevofluran, istorija umerene do teške disfunkcije jetre praćene žuticom, temperaturom i eozinofilijom, poznata ili suspekta predispozicija za malignu hipertermiju.

Zbog svih navedenih karakteristika, kao i malog procenta neželjenih dejstava, i malog broja kontraindikacija sevofluran je apsolutno bezbedan i u svakodnevoj upotrebi u celom svetu. Sevofluran je našao mesto u svim vrstama hirurgije kao samostalan anestetik ili kao deo balansirane anestezije. Od 2010 godine se u Srbiji najveći procenat opštih anestezija se izvodi sevofluranom.

Abstract

Sevoflurane is a non-flammable, non-explosive, and volatile inhalation liquid that is delivered to the patient via an evaporator and is used for inhalation anesthesia as a halogenated inhalation anesthetic. Sevoflurane was discovered in 1971 and introduced into clinical practice in Japan in 1990. It has been used in The United States as in Europe since 1995. It has been used in our daily practice since the beginning of the 2000s. Due to its favorable physical characteristics, Sevoflurane has become one of the inhalation anesthetics that is most often used in modern clinical practice.

The characteristics of sevoflurane are:
1. clear, colorless, non-corrosive, non-flammable, non-explosive, easily volatile liquid
2. low blood/gas solubility coefficient,
3. sweet-smelling gas,
4. does not act as an irritant,
5. acts as a bronchodilator,
6. has a cardioprotective effect,
7. coronary vasodilator

Sevoflurane undergoes a 3-5% dose-dependent biotransformation in the liver, to the basic metabolite hexafluoroisopropanol, inorganic fluoride ion, and CO_2. The degree of degradation increases with the length of anesthesia.

The effects of Sevoflurane on organic systems are:
1. It lowers the metabolic consumption of oxygen in nerve cells, which causes EEG depression. Increases flow through the CNS (dose-dependent), slightly increases intracranial pressure in values over 1 MAC.
2. Dose-dependently lowers arterial pressure and systemic vascular resistance with minimal effect on stroke volume. Reduces contractility by about 25% at a dose of 1 MAC.
3. It has a pronounced bronchodilator effect. It causes respiratory depression but less than other anesthetics.
4. Causes relaxation of skeletal muscles and potentiates the effect of muscle relaxants.
5. It has a slight effect on liver metabolism as well as the flow through the kidneys.Therefore, liver damage is very rare.
6. At a dose higher than 1 MAC, it increases the risk of uterine atony and increases the risk of increased blood loss during caesarean sections under general anesthesia.

Contraindications to the use of sevoflurane are known hypersensitivity to sevoflurane, history of moderate to severe liver dysfunction accompanied by jaundice, fever, and eosinophilia, known or suspected predisposition to malignant hyperthermia.

Due to all these characteristics, as well as the small percentage of side effects, and the small number of contraindications, sevoflurane is absolutely safe in everyday use worldwide. Sevoflurane has found a place in all types of surgery as a stand-alone anesthetic or as part of balanced anesthesia. Since 2010, the highest percentage of general anesthetics in Serbia has been performed with sevoflurane.

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Dobro mi je - tako mi treba
I'm fine – this is what i need

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Apstrakt

„Sreća nije nagrada za vrlinu, već je vrlina sama. Niti u sreći uživamo zato što smo obuzdali svoje strasti. Naprotiv, zato što u njoj uživamo, u stanju smo da ih obuzdamo." (Spinoza)

Koliko često se zapitamo: Jesmo li srećni? Šta je to što nam je potrebno za sreću? Kako pronaći sreću? Sreća nije čarobna sposobnost, niti dar Bogova! Sreća je stanje uma, način razmišljanja i ponašanja. Jedna od tajni sreće leži u odluci da se bude srećan, druga u razumevanju sebe i drugih, treća u otkrivanju i stvaranju sopstvenog puta i našem odnosu prema preprekama na tom putu. „Rad na sebi" obuhvata mnogobrojne aktivnosti, vraćanje sebi, svojoj suštini. Celovitost. Sazrevanje. Individuacija. Postoje mnogi načini na kojima možemo raditi na sebi i većina je komplementarna. Kombinacijom pristupa se često može postići fascinantan rezultat.

O.L.I. metod je usmeren na dve ključne, složene sposobnosti: sposobnost za ljubav i sposobnost za rad. Ove dve ljudske sposobnosti su kao „lego kocke" sastavljene od određenog broja manjih jednostavnijih kockica – bazičnih emotivnih kompetencija:
1. Sposobnost za neutralizaciju i mentalizaciju (razboritost psihe)
2. Celovitost objekta (lepak psihe)
3. Konstantnost objekta (stabilizator psihe)
4. Tolerancija na ambivalenciju (usmerivač psihe)
5. Tolerancija na frustraciju (imunitet psihe)
6. Volja (motor)
7. Inicijativa (pokretač psihe)

Teško je živeti, voleti i raditi bez razvijene bilo koje od navedenih sposobnosti. Bez razvijene neutralizacije osoba je u vlasti svojih nagona, impulsivna i iracionalna. Bez „lepka" doživljaji osobe su rascepljeni na crno- beli, svet dobra i zla (kaže se da je „odlepila"). Bez konstantnosti, osoba je nestabilna. Bez tolerancije osoba „puca pod pritiskom." Bez tolerancije na ambivalenciju osoba je neodlučna, nesposobna da se opredeli i donese odluku. Bez volje, osoba je kratkog daha, bez energije da podrži u kontinuitetu sopstvene želje i ciljeve. Bez inicijative osoba je reaktivna, nema „ključ" za svoj „motor" potrebno je da je pokrene neko drugi.

Bez bilo koje od ovih kockica psiha je defektna, zadatak svakog čoveka je da otkrije kako funkcioniše život da bi bio kompetentnijida se u životu bolje snalazi i da mu se raduje. Neko je više usmeren na sticanje novih veština i na lični razvoj koji će omogućiti brži napredak u karijeri, neko drugi na rešavanje psiholoških problema, blokada i strahova.

Učenje je proces koji traje ceo život. Lični rad podrazumeva sve ono što nam je potrebno da bismo doživeli duševno i fizičko blagostanje, a samim time i spoznali sreću. Promena je neizbežna, lični rast je izbor.

'Abstract

Happiness is not the reward of virtue, but is virtue itself; nor do we delight in happiness because we restrain from our lusts; but on the contrary, because we delight in it, therefore we are able to restrain them.' (Baruch Spinoza)

How many times have we wondered: are we happy? What do we need for happiness? How can we find it? Happiness is not a magical capacity, and it is not God`s gift. Happiness is the state of mind, the way of thinking and behavior. There are three secrets of happiness: the decision of being happy, understanding yourself and others, and discovering your own path and relation with the obstacles in that path. Improving yourself includes plenty of actions, returning to yourself and your essence. Integrity. Becoming mature. Individuality. There are many ways we can use to improve ourselves and most of them are complementary. If we combine the ways of approach, we can achieve fascinating results.

O. L. I. method is focused on two complex capabilities: the capability to love and the capability to work. These capabilities are like `Lego bricks` consisted of many small bricks – basic emotional competencies.
1. Capability of mentalization and neutralization (prudence of phyche)
2. The integrity of the object (glue of the psyche)
3. The constancy of the object (stabilizer of the psyche)
4. Tolerance to ambivalence (guide of the psyche)
5. Tolerance to frustration (psyche immunity)
6. Will (engine)
7. Initiative (initiator of the psyche)

It is hard to live, love and work if any of these capabilities are not developed. If the neautralization is not developed, an individual is under the power of their instincts, they are impulsive and think irrationally. Without "glue", a person's experiences are divided into black and white, the world of good and evil. Without tolerance, the person is under pressure. Without tolerance for ambivalence, an individual is indecisive. Without a will, they don`t have the energy to continuously support their own desires and goals. Without initiative, they are reactive and have no "key" to their "engine" and need to be motivated by someone else.

If any of these bricks is missing, our phyche is defect. Therefore, every human has a task to discover all the functions of life so they can evoke the capability of leading a joyful life.

Some people are rather focus on gaining new skills and their personal growth that will help them develop their careers. Some are focused on solving psychological problems, blockages and fears.

Learning is the process that can last the whole life. Personal improvement refers to everything we need to experience mental and physical well-being and happiness. Change is inevitable, personal growth is a choice.

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Medicinska reč **Medical Word**

APSTRAKT 9S 2020; 1(2): 61–61 ABSTRACT 9E

Greške prilikom korišćenja inhalera i njihov uticaj na ishod lečenja

Errors in inhaler use and their effects on the treatment outcome

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Apstrakt

Adherenca podrazumeva svesno prihvatanje činjeničnog stanja iz koga proizilazi pridržavanje saveta lekara. Najčešći uzroci loše adeherence potiču od bolesnika, bolesti, načina lečenja, samog lekara, kao i socioekonomskih faktora. Primeri loše adherence su: neuzimanje propisanog leka, nepridežavanje propisanog doziranja i vremena uzimanja leka, nepridržavanje preporuka za način uzimanja leka i prevremeno prekidanje terapije. Posledice loše adherence su: pogoršanje ili progresija bolesti, greške lekara u proceni toka bolesti i uspešnosti lečenja, nemogućnost praćenja nus pojava leka.

Poboljšanja adherence kod bolesnika sa astmom i HOBP moguće je postići kroz bihejvioralnu intervenciju, edukaciju i odabir inhalera. Savršen uređaj za primenu inhalatorne terapije podrazumelva: malu brzinu aerosola i male partikule (nije još uvek napravljen). Faktori koji učestviju u depoziciji inhaliranog leka u plućima su: karakteristike aerosola i faktori zavisni od pacijenata. Karakteristike aerosola podrazumevaju: dijametar partikula, frakciju finih partikula, brzinu aerosola, brzina i trajanje aerosolnog oblaka, lipofilnost, higroskopnost. Zavisnost od pacijenata podrazumeva: inhalacini manevar (inspi. volumen, insp. protok, zadržavanje vazduha), zahvaćenost disajnjih puteva, tj. težina bolesti, prihvatanje uređaja, komplijansa itd. U zavisnosti od veličine partikule u aerosolu tri su mehanizna njihovog dopremanja do obolelih disajnjih puteva: impakcija, sedimentacija i difuzija. Veći volumen inhalacije podrazumeva bolju depoziciju leka. Spor insp. protok podrazumeva bolju penetraciju leka u periferne disajne puteve.

Instrukcije za pravilno korišćenje inhalera generalno bi mogle kao osnovu imati određene postulate. Kada je reč o volumenu inhalacije – lagani duboki izdah, a potom dubok udah. Protok vazduha: za pMDI i SMI postepena spora i duboka inhalacija u trajanju od 4–5s. U slučaju DPI snažna duboka i jaka inhalacija. Zadržavanje vazduha (bez obzira na izabrani divajs) u trajanju od 8–10 sekundi, a potom lagan izdah.

Kakav treba da bude idealni inhalar po mišljenju bolesnika i lekara u mnogome se razlikuje. Ono u čemu se slažu obe strane je da je divajs lak za upotrebu, da ima malo koraka u izvođenju inhalacije, da su svi lekovi u jednom inhaleru, da ima brz pozitivan fitbek, da su potencijalne greške u toku korišćenja svedene na minimum, da je upotrebljiv u svim vremenskim prilikama i da ima razumnu cenu koštanja.

Abstract

Adherence implies conscious acceptance of the factual situation which refers to the listening of doctor's advice. The most common causes of poor adherence come from the patient, the disease, the method of treatment, the doctor himself, as well as socioeconomic factors. The examples of poor adherence relate to not taking the prescribed medicine, not adhering to the prescribed doses and time of taking the medicine, not following the recommendations for the way of taking the medicine and prematurely stopping the therapy. The consequences of poor adherence are worsening or progression of the disease, doctors' mistakes in assessing the course of the disease, and the success of treatment, inability to monitor the side effects of the medicine.

Improvements in adherence in patients with asthma and COPD can be achieved through behavioral intervention, education, and inhaler selection. The perfect device for the application of inhalation therapy includes low aerosol velocity and small particles (not yet made). Factors that participate in the deposition of inhaled drugs in the lungs are aerosol characteristics and patient-dependent factors. Aerosol characteristics include particle diameter, fine particle fraction, aerosol velocity, aerosol-cloud velocity and duration, lipophilicity, hygroscopicity.

Dependence on the patient includes inhalation maneuver (inspiratory volume, inspiratory flow, and air retention), airway involvement – i.e., the severity of illness, acceptance of the device, compliance, etc. Depending on the size of the particle in the aerosol, there are three mechanisms of their delivery to the diseased airways: impaction, sedimentation, and diffusion. Higher inhalation volume implies better drug deposition. Slow inspiratory flow involves better penetration of the medicine into periferal aiways.

Instructions for the proper use of inhalers could generally be based on certain postulates. When it comes to the volume of inhalation - a light deep exhalation, and then a deep inhalation Airflow: for pMDI and SMI gradual slow and deep inhalation for 4-5s. In the case of DPI strong deep and strong inhalation. Holding air (regardless of the chosen device) for 8-10 seconds, and then a light exhalation.

When it comes to a perfect inhaler, the opinions of doctors and patients differ greatly. What both sides agree on is the device should be easy to use. There should also be only few steps in the inhalation performance and all medications should be involved in one inhaler. It should also have positive feedback and all the potential erros should be minimized. The device should also be useable in all weather conditions and its price should be reasonable.

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APSTRAKT 10S 2020; 1(2): 62–62 ABSTRACT 10E

Značaj preanalitičke faze za validnost laboratorijskih rezultata

Significance of pre-analytical phase for the validity of laboratory results

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Apstrakt

U savremenoj laboratorijskoj medicini velika pažnja se poklanja validnosti laboratorijskih rezultata u svakodnevnom kliničkom radu. Osnovni preduslov za dobijanje tačnih laboratorijskih rezultata je adekvatna priprema pacijenta i pravilna obrada biološkog materijala, odnosno njegova priprema za primenu odgovarajućih analitičkih procedura. Treći izuzetno značajan faktor validnog uzorka biološkog materijala jeste pravilno uzorkovanje što podrazumeva pravilnu pripremu procedura i upotrebu odgovarajućeg laboratorijskog pribora. Svim napred navedenim faktorima neophodno je pokloniti adekvatnu pažnju, što pre svega podrazumeva praćenje najnovijih naučnih dostignuća korišćenjem referentnih izvora informacija.

Najznačajniji biološki materijal je svakako serum, odnosno puna krv, koja je pod kontrolom homeostatskih mehanizama i kao takva pripada relativno zatvorenom sistemu. Za razliku od krvi, urin predstavlja biološki materijal koji se iz organizma odstranjuje upravo zahvaljujući aktivnosti homeostatskih mehanizama sa ciljem da očuvaju adekvatnu unutrašnjost biološkog sistema. Danas postoje brojne informacije o uticaju hrane i načina ishrane na vrednosti laboratorijskih analiza, a takođe i informacije o uticaju lekova koji mogu da dovedu do lažno povišenih i lažno sniženih laboratorijskih rezultata. Veoma je važno raspolagati sa znanjima o interakciji lekova, u tom smislu da razlikujemo slučajeve kada oni deluju na nivou fizioloških mehanizama ili uplivišu u mehanizme analitičkih procedura. Takva saznanja nam pomažu da u praksi prepoznajemo interakcije hrane i lekova sa laboratorijskim analizama.

Sva ova postojeća znanja potrebno je svakodnevno evaluirati i inovirati kako bi njihova primena u praksi dala maksimalnu korisnost.

Abstract

In modern laboratory medicine, great attention is paid to the validity of laboratory results in everyday clinical work. The basic precondition for obtaining accurate laboratory results is adequate preparation of the patient and proper processing of biological material - i.e., his preparation for the application of appropriate analytical procedures. The third extremely important factor of a valid sample of biological material is proper sampling, which means proper preparation of procedures and the use of appropriate laboratory equipment. It is necessary to pay adequate attention to all these factors, which primarily means monitoring the latest scientific achievements while using reference sources of information.

The most important biological material is certainly serum - i.e., whole blood, which is under the control of homeostatic mechanisms and it belongs to a relatively closed system. Unlike blood, urine is a biological material that is removed from the body thanks to the activity of homeostatic mechanisms in order to preserve the adequate interior of the biological system. There is abundant amount of information on the impact of food and diet on the value of laboratory tests, as well as information on the impact of medications that can lead to falsely elevated and falsely decreased laboratory results. It is very important to have knowledge about the interaction of drugs, in the sense that we distinguish cases when they act at the level of physiological mechanisms or affect the mechanisms of analytical procedures. Such knowledge helps us recognize the interactions of food and medications with laboratory analyses in practice.

All the existing knowledge should be evaluated and inovated so that their use in practice could provide maximum usefulness.

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APSTRAKT 11S 2020; 1(2): 63–63 ABSTRACT 11E

Dijagnoza i terapija ezofagogastričnih varikoziteta kod bolesnika sa cirozom jetre

Diagnosis and therapy of esophagogastric varicosity in patients with liver cirrhosis

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Apstrakt

Krvarenje iz ezofagogastričnih varikoziteta je najčešća i najteža komplikacija ciroze jetre i direktno ugrožava život bolesnika. Uprkos dostignutom napretku u tretmanu zadnjih decenija, varikozno krvarenje još uvek nosi mortalitet od 20 % unutar prvih šest nedelja od epizode krvarenja.

Razvoj varikoziteta i varikozne hemoragije je direktna posledica portne hipertenzije. Zbog toga praćenje bolesnika sa cirozom jetre zavisi od faze portne hipertenzije u kojoj se pacijent nalazi, od pacijenata sa cirozom i portnom hipertenzijom koji još nisu razvili varikozitete, do pacijenata sa akutnim varikoznim krvarenjem, kod kojih je potrebna kontrola aktivne epizode krvarenja i prevencija rekrvarenja.

Zlatni standard za dijagnozu varikoziteta je ezofagogastroduodenoskopija. Preporučuje se da bolesnici sa cirozom jetre budu podvrgnuti endoskopskom skriningu za varikozitete u vreme postavljanja dijagnoze. Nalaz velikih varikoziteta jednjaka sa „red wale marks" na njihovoj površini ukazuje na povećani rizik varikoznog krvarenja, tako da se na vreme može početi sa primarnom profilaksom varikoznog krvarenja uključivanjem neselektivnih betablokatora ili primenom endoskopske varikozne ligacije.

Bolesnici koji su preživeli epizodu akutne varikozne hemoragije imaju povećani rizik za recidivantno varikozno krvarenje. Oko 30–40% pacijenata ima rizik od rekrvarenja unutar 2-3 dana i 60% ponovo krvari unutar prvih šest nedelja. Mortalitet u prvih šest nedelja je 20–25% i najčešći je zbog rekrvarenja i insuficijencije jetre. Rizik ranog recidiva krvarenja veći je u bolesnika sa teškom hepatocelularnom insuficijencijom. Najbolja terapijska opcija za prevenciju rekurentne varikozne hemoragije je kombinacija neselektivnih beta blokatora i endoskopske varikozne ligacije. Transjugularni intrahepatični portosistemski šant (TIPS) ili šant hirurgiju treba razmatrati u bolesnika koji imaju rekurentnu varikoznu hemoragiju uprkos kombinovanoj farmakološkoj i endoskopskoj terapiji.

Abstract

Bleeding from esophagogastric varicose veins is the most common and most serious complication of liver cirrhosis and directly endangers the life of patients. Despite advances in treatment in recent decades, varicose hemorrhage still carries a mortality rate of 20% within the first six weeks of a bleeding episode.

The development of varicosity and varicose hemorrhage is a direct consequence of portal hypertension. Therefore, monitoring of patients with cirrhosis of the liver depends on the stage of portal hypertension in which the patient is, from patients with cirrhosis and portal hypertension who have not yet developed varicose veins, to those with acute varicose bleeding, who need control of active bleeding and prevention of bleeding.

The gold standard for the diagnosis of varicosity is esophagogastroduodenoscopy. It is recommended that patients with cirrhosis of the liver undergo endoscopic screening for varicose veins at the time of diagnosis. The finding of large esophageal varices with "red wale marks" on their surface indicates an increased risk of varicose bleeding so that primary prophylaxis of varicose bleeding can be started in time by including non-selective beta-blockers or endoscopic varicose ligation.

Patients who have survived an episode of acute varicose hemorrhage have an increased risk of recurrent varicose hemorrhage. About 30-40% of patients are at risk of bleeding within 2-3 days and 60% bleed again within the first six weeks. Mortality in the first six weeks is 20-25% and is most common due to bleeding and liver failure. The risk of early recurrence of bleeding is higher in patients with severe hepatocellular insufficiency. The best therapeutic option for the prevention of recurrent varicose hemorrhage is a combination of nonselective beta-blockers and endoscopic varicose ligation. Transjugular intrahepatic portosystemic shunt (TIPS) or shunt surgery should be considered in patients with recurrent varicose hemorrhage despite combined pharmacological and endoscopic therapy.

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Akutno plućno srce
Acute pulmonary heart

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Apstrakt

Pod plućnim srcem (Cor pulmonale) podrazumevamo sekundarno povećanje i oštećenje desnog srca nastalo zbog razvoja plućne hipertenzije usled bolesti plućnog parenhima i disajnih puteva, promene plućne vaskularne mreže, smetnje ventilacije, bolesti neuromuskularnog aparata i deformiteti grudnog koša.

Plućna hipertenzija koja dovodi do nastanka Cor pulmonale uzrokovana je ireverzibilnom redukcijom vaskularne mreže (embolija, garanulomatoze) ili velikog gubitka plućnog parenhima (hiruško lečenje), artetijskom hipoksemijom zbog nedovoljne ventilacije plućnih alveola na manjem delu pluća ili difuzno, kao i neadekvatnom difuzijom kiseonika kroz plućnu kapilarnu membranu (plućna fibroza).

Plućno srce može biti biti akutno i hronično.

Akutno plućno srce (APS) se definiše kao akutna insuficijencija desne komore nastala zbog naglog skoka pritiska u plućnoj arteriji usled značajne redukcije plućne vaskularne mreže. APS je gotovo uvek rezultat masivne plućne embolije. APS često nastaje iz, na oko dobrog zdravlja, sa vrlo teškom kliničkom slikom koja često završava smrću. Prvi simptomi su pleuralna bol, dispneja, kašalj i hemoptizija.

Plućna embolija (PE) najcešće nastaje kao posledica začepljenja ugruškom jednog ili više ogranaka plućnih arterija uz propratni vazospazam. Najčešće je posledica tromboze dubokih vena nogu ili male karlice.

Abstract

Pulmonary heart (Cor pulmonale) represents secondary enlargement and damage to the right heart caused by the development of pulmonary hypertension due to diseases of the pulmonary parenchyma and respiratory tract, changes in the pulmonary vascular network, ventilation disorders, neuromuscular diseases, and chest deformities.

Pulmonary hypertension that leads to Cor pulmonale is caused by irreversible reduction of the vascular network (embolism, granulomatosis) or large loss of pulmonary parenchyma (surgical treatment), arterial hypoxemia due to insufficient ventilation of the pulmonary alveoli in a small part of the lung ili difuzno, or diffusely, as well as by inadequate diffusion of oxygen through the pulmonary capillary membrane (pulmonary fibrosis).

Pulmonary heart can be acute and chronic.

The acute pulmonary heart is defined as an acute right ventricular failure caused by sudden pressure jump in the pulmonary artery due to a significant reduction in the pulmonary vascular network. It is almost always the result of a massive pulmonary embolism, and it often arises from a very severe clinical picture that often ends in death. The first symptoms are pleural pain, dyspnea, cough, and hemoptysis.

Pulmonary embolism (PE) most often occurs as a consequence of a blockage of one or more branches of the pulmonary arteries with concomitant vasospasm. It is most often the result of thrombosis of the deep veins of the legs or small pelvis.

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APSTRAKT 13S 2020; 1(2): 65–65 ABSTRACT 13E

Ishrana hirurških pacijenata
Nutrition in surgical patients

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Apstrakt

Svaka hirurška intervencija dovodi do niza hormonalnih i metaboličkih promena, koje povećavaju energetsku potrošnju u organizmu. Uspostavljanje normalne homeostaze pre i posle intervencije moguće je samo uz odgovarajuću ishranu (oralnu, enteralnu i/ili parenteralnu).

Osnovni ciljevi ishrane hiruških pacijenata su:
– smanjenje gubitka telesne mase,
– zadovoljenje energetskih potreba i potreba za mikronutrijentima,
– korekcija specifičnih nutritivnih deficita,
– uspostavljanje i održavanje normalne ravnoteže tečnosti i elektrolita,
– sprečavanje neželjenih posledica hiruške intervencije, kao što su infekcija i duži boravak u bolnici.

Ishrana u preoperativnom periodu zavisi od brojnih faktora, a najvažniji su:
– kliničko stanje i stanje ishranjenosti pacijenta,
– vrsta i obim hiruške intervencije,
– stanje organa za varenje,
– očekivana dužina perioperativnog perioda, itd.

Pothranjenost, kao i gojaznost, utiču na pojavu komplikacija i mortalitet, tako da je pre operacije neophodno oceniti stanje ishranjenosti svakog pacijenta.

Ukoliko je potrebno, sa odgovarajućom dijetoterapijom treba krenuti što pre.

Kod pothranjenih pacijenata, ishranu treba pojačati do 28 dana pre operacije. Ukoliko je oralna ishrana kontraindikovana, poželjnije je sprovoditi enteralnu ishranu u odnosu na parenteralnu, a često se primenjuju i kombinacije.

Abstract

Every surgical intervention leads to a series of hormonal and metabolic changes, which increase energy consumption in the body. The establishment of normal homeostasis before and after the intervention is possible only with proper nutrition (oral, enteral, or parentral).

The main goals of the diet of surgical patients are:
– reduction of weight loss,
– meeting energy and micronutrient needs,
– correction of specific nutritional deficits,
– establishing and maintaining a normal balance of fluids and electrolytes,
– prevention of unwanted consequences of surgical intervention, such as infection and longer hospital stay.

Nutrition in the preoperative period depends on the numerous factors, and the most important are:
– clinical condition and nutritional status of the patient,
– type and scope of surgical intervention,
– condition of the digestive organs,
– expected length of the perioperative period, etc.

Malnutrition, as well as obesity, affect the occurrence of complications and mortality, so it is necessary to assess the nutritional status of each patient before the operation.

If necessary, appropriate diet therapy should be started as soon as possible.

In malnourished patients, the diet should be strengthened up to 28 days before the operation. If oral nutrition is contraindicated, it is preferable to carry out enteral nutrition in relation to parenteral, and combinations are often used.

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Značaj i rad timske sestre/tehničara sa izabranim lekarom u primarnoj zdravstvenoj zaštiti

Significance and work of the team nurse/teachnician with the chosen doctor in primary health care

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Apstrakt

Timska sestra/tehničar izabranog lekara u primarnoj zdravstvenoj zaštiti ima ključnu ulogu u komunikaciji zdravstvene službe i pacijenata jer je ona uglavnom prva osoba iz zdravstvene službe sa kojom se sreću korisnici zdravstvene zaštite. Zato je posao timske sestre/tehničara i najteži, jer mora u kratkom vremenskom roku dati pravilne informacije pacijentu, izvršiti trijažu, spremiti medicinsku dokumentaciju u vidu zdravstvenog kartona, elektronskog kartona, izvržiti zakazivanje pacijenata, odraditi deo kad pacijent izađe od lekara i na kraju sve kartone uložiti na mesto i završiti neophodnu papirologiju (protokol, smtovnice, prijave bolesti...).

Timska sestra/tehničar mora neprestano da vrši trijažu prisutnih pacijenata i po potrebi obavestiti lekara o neophodnosti prijema ili hitnog prijema ugroženog pacijenta. Sestra mora da vodi računa i o zakazanim pacijentima, ali i o pacijentima drugih lekara koji su u odsustvu a pokriva ih njen lekar. Ukoliko uzmemo u obzir da izabrani lekar treba da pregleda do 36 pacijenata u toku dana, timskoj sestri/tehničaru to treba da bude brojka o kojoj treba voditi računa, jer ukoloko se uradi više od tog broja, lekar će se smatrati ne kvalitetnim i biće i lekaru i sestri smanjena kapitaciona ocena za kvalitet a samim tim i plata. Isto tako se ne sme dogoditi da nekom pacijentu bude ugroženo zdravlje ili život na bilo koji način. Timska sestra ima važnu ulogu i u zdravstveno vaspitnom radu, od ličnog primera, preko razgovora sa pacijentima, pozivanja pacijenata na sistematske i druge preventivne preglede, kao i vođenja računa o administraciji tih pregleda, da bi ti pregledi podigli kapitacionu ocenu i lekaru i timskoj sestri.

Abstract

The team nurse/technician of the chosen doctor in primary health care has a crucial role in the communication between the health service and patients because they are usually the first to be met by the health care users. That is why the job of a team nurse/technician is the most difficult because they have to give the correct information to the patient in a short time, perform triage, save medical documentation in the form of the health record, and electronic record. They also have to make the appointments, do the procedure after the doctor's appointment, put the records in place and complete the necessary paperwork (protocol, death certificate, disease reports...).

The team nurse/technician must continuously perform triage and, if necessary, inform the doctor about the necessity of admission or urgent admission of the endangered patient. The nurse must take care of the scheduled patients, but also the patients of other doctors who are absent and are covered by the doctor they are working with. Considering that the chosen doctor should examine up to 36 patients during the day, the team nurse/technician should be cautions of that number because in case they examine more than 36 patients, the doctor will not be considered quality enough, and the capitation rating for quality for both doctor and nurse will be reduced as well as the salary.

A patients' health or life must not be endangered. The team nurse has an important role in health education work, from personal example, through conversations with patients, inviting patients to systematic and other preventive examinations, as well as taking care of the administration of those examinations, so that these examinations raise the capitation rating of both doctor and team nurse.

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APSTRAKT 15S 2020; 1(2): 67–67 ABSTRACT 15E

Prikupljanje bioloških dokaza i dokumentovanje seksualnog nasilja

Collection of biological evidence and documentation of sexual violence

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Apstrakt

Seksualno nasilje predstavlja svaki seksualni čin koji je počinjen protiv volje neke osobe. Seksualno nasilje može da počini bilo koja osoba bez obzira na prirodu odnosa sa žrtvom i u bilo kom okruženju. To uključuje, ali nije ograničeno na, silovanje, pokušaj silovanja i seksualno ropstvo - eksploataciju, kao i neželjeno dodirivanje, pretnje seksualnim nasiljem i verbalno seksualno uznemiravanje. Klinička procena kod sumnje da je neka osoba žrtva seksualnog zlostavljanja zahteva multidisciplinarni, holistički pristup. Vreme i obim fizikalnog pregleda zavisi od prirode tegoba, mogućnosti lokalne sredine, potrebe za sudskomedicinskim veštačenjem te od stručnosti i načina rada zdravstvenih radnika. Tokom forenzičkog (sudsko-medicinskog) pregleda žrtve seksualnog nasilja, lekar i medicinska sestra/tehničar dokumentuju fizičke nalaze koji često pružaju informacije od značaja u rekonstrukciji detalja o prijavljenom nasilju. Primarni cilj forenzičkog pregleda je prikupljanje dokaza koji mogu pomoći da se dokaže ili opovrgne veza između pojedinaca i/ili između pojedinaca i predmeta ili mesta izvršenja krivičnog dela.

U slučajevima seksualnog nasilja, kao i u svakoj drugoj krivičnoj istrazi, neophodno je primenjivati sledeće principe prilikom uzorkovanja bioloških dokaza:
– pažljivo prikuljanje bioloških uzoraka, izbegavajući kontaminaciju;
– prikupljanje uzoraka što je ranije moguće (< 120 sati)
– tačno obeležavanje svih prikupljenih bioloških uzoraka;
– obezbeđivanje lanca primopšredaje i zaštite od neovlašćenog otvaranja prikupljenog dokaznog materijala;
– dokumentovanje detalja svih procedura prikupljanja i rukovanja.

Učesnici će putem predavanja biti upoznati sa merama i aktivnostima koje doprinose što uspešnijoj dokumentaciji seksualnog nasilja, na osnovu preporuka međunarodnih profesionalnih udruženja i iskustava iz naše zemlje i drugih zemalja sveta. Osmišljeno je interaktivno predavanje, tako da učesnicima prenese potrebna znanja i doprinese izgrađivanju relevantnih veština i razvoju sveukupne kompetentnosti za klinički rad u ovoj oblasti.

Abstract

Sexual violence is any sexual act committed against the will of a person. Sexual violence can be committed by anyone, regardless of the nature of the relationship with the victim and in any environment. These include, but are not limited to, rape, attempted rape, and sexual slavery - exploitation, as well as unwanted touching, threats of sexual violence, and verbal sexual harassment. Clinical assessment when a person is suspected of being a victim of sexual abuse requires a multidisciplinary, holistic approach. The time and scope of the physical examination depend on the nature of the problem, the possibilities of the local environment, the need for forensic experts, and the expertise and manner of work of health workers. During a forensic (forensic) examination of a victim of sexual violence, the doctor and nurse/technician document physical findings that often provide information relevant to reconstructing the details of the reported violence. The primary purpose of a forensic examination is to gather evidence that can help prove or disprove a link between individuals and/or between individuals and the object or place of the crime.

In cases of sexual violence, as in any other criminal investigation, it is necessary to apply the following principles when sampling biological evidence:
– a careful collection of biological samples, avoiding contamination;
– the collection of samples as early as possible (<120 hours);
– an accurate marking of all collected biological samples;
– providing a chain of handover and protection against unauthorized opening of the collected evidence;
– documenting the details of all collection and handling procedures.

Through lectures, the participants will be introduced to the measures and activities that contribute to the most successful documentation of sexual violence, based on the recommendations of international professional associations and experiences from our country and the countries all over the world. An interactive lecture has been designed to transfer the necessary knowledge to the participants and contribute to the building of relevant skills and the development of overall competence for clinical work in this area.

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Antiseptici u svakodnevnoj upotrebi
Antiseptics in daily use

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Apstrakt

5–10% svih hospitaliziranih bolesnika dobije infekcije povezane sa zdravstvenom njegom tokom liječenja, a čiji su najčešći uzročnici bakterije.

Antiseptici i dezinficijensi predstavljaju ista jedinjenja koja se različito zovu zavisno od koncentracije. Sve su to materije koje uklanjaju bakterije sa kože ili predmeta, međutim, ako su slabije koncentracije nazivamo ih antiseptici. Antiseptici su sredstva koja suzbijaju rast ili djelovanje mikroorganizama, bilo sprječavanjem njihova djelovanja ili njihovim uništavanjem, odnosno sredstva koja smanjuju količinu mikroorganizama na nivo koji nije opasan po zdravlje. Naziv antiseptic koristi se najčešće za pripravke koji se nanose na kožu i "živo" tkivo. Ako se radi o većim koncentracijama tada ih nazivamo dezinficijensi. Osim od koncentracije, antiseptička moć zavisii od temperature i okoline bakterija.

Za dezinfekciju intaktne kože postoje brojni preparati. U antiseptike za kožu ubrajaju se neki hlorni preparati, kvarterniamonijevi spojevi, jodofori, bakteriostatske boje, derivati fenola, spojevi heksaklorofenaiklorheksidina, anorganski i organski peroksidiialkohol. Popis preparata bio bi i duži da mnogi spojevi nedjeluju štetno na tkivo. Tako se samo neki od ovih preparata mogu koristiti i na sluznicama, i to uz dodatna ograničenja u upotrebi. U antisepsi sluznica i rana pred antiseptike se postavljaju mnogo stroži kriteriji, zbog osjetljivosti sluznice i velike moći resorpcije s njezine površine u organizam te posljedično mogućega sistemskog toksičnog djelovanja.

Hronične rane su posljedica brojnih komorbiditetnih faktora, a dominantni patofiziološki process i su ishemija, edem i infekcija uz dob, neuropatija i trauma. Raspadom integriteta kože nastala rana biva kontaminirana, a zatim i kolonizirana primarno fiziološkom florom domaćina, a zatim mikrobima iz okoline. Sve hronične rane su kolonizirane, a infekcija se razvija u 5–40% slučajeva zavisno o vrsti, lokalizaciji, komorbiditetnim faktorima, trajanju, njezi i liječenju.

Cilj antisepse je da ubije ili inaktivira mikrobe – primarno bakterije u rani, redukcijom broja ili sprječavanjem multiplikacije u što dužem razdoblju. Antiseptici se primjenjuju u profilaktičke svrhe jednokratno, nekoliko puta tokom jednog dana ili jednokratno u trajanju od 5 do 7 dana (obloge). Antiseptici primijenjeni u terapijske svrhe primjenjuju se višekratno, kroz duže vrijeme, 7 - 10 - 14 dana ili do početka stvaranja granulacija. Primjena antiseptika je ciljani i ograničeni postupak, osobito pri infekciji hronične rane.

Octenidini predstavljaju velik korak naprijed, jer najbolje ispunjavaju zahtjeve za širokim antimikrobnim djelovanjem. Zdravstveni radnici se susreću s manjkom ili nedostatkom jasnih uputa, kako, kada, koliko dugo i koji od antiseptika primijeniti u svakodnevnoj kliničkoj praksi. Priprimjeni antiseptika neophodno je jasno definisati razloge upotrebe, ciljeve i trajanje primjene.

Abstract

5-10% of all hospitalized patients get infections during their health treatment. These infections are mostly caused by bacteria.

Antiseptics and disinfectants are the same compounds that are called differently depending on the concentration. These are all substances that remove bacteria from the skin or objects. However, if the concentration is lower, we call them antiseptics. Antiseptics are compounds that inhibit the growth or action of microorganisms, either by preventing their action or destroying them. They reduce the number of microorganisms to a level that is not dangerous to health. The name antiseptic is most commonly used for preparations applied to the skin and "living" tissue. If these are higher concentrations then we call them disinfectants. Apart from the concentration, the antiseptic power depends on the temperature and the environment of the bacteria.

There are numerous preparations for disinfecting intact skin. Antiseptics for the skin include some chlorine preparations, quaternary ammonium compounds, iodophors, bacteriostatic dyes, phenol derivatives, hexachlorophenachlorhexidine compounds, inorganic and organic peroxidial alcohol. The list of preparations would be even longer if many compounds did not have a detrimental effect on the tissue. Thus, only some of these preparations can be used on mucous membranes, with additional restrictions on use. In antisepsis of mucous membranes and wounds, much stricter criteria are set for antiseptics, due to the sensitivity of the mucosa and the high power of resorption from its surface into the body and the consequent possible systemic toxic effects. Chronic wounds are the result of numerous comorbid factors, and the dominant pathophysiological process is ischemia, edema and infection with age, neuropathy and trauma. With the disintegration of the integrity of the skin, the resulting wound is contaminated, and then colonized primarily by the physiological flora of the host, and then by microbes from the environment. All chronic wounds are colonized, and the infection develops in 5% -40% of cases depending on the type, location, comorbidity factors, duration, care and treatment. The aim of antisepsis is to kill or inactivate microbes - primarily bacteria in the wound, by reducing the number or preventing multiplication for as long as possible. Antiseptics are applied for prophylactic purposes once, several times during one day or once for 5 to 7 days (dressings). Antiseptics used for therapeutic purposes are applied repeatedly, over a long period of time, 7 - 10 - 14 days or until the beginning of granulation. The use of antiseptics is a targeted and limited procedure, especially in infection in chronic wounds.

Octenidines represent a big step forward, as they best meet the requirements for broad antimicrobial activity. Healthcare professionals face a lack of clear instructions on how, when, for how long, and which of the antiseptics to apply in everyday clinical practice. The use of antiseptics is necessary to clearly define the reasons for use, objectives, and duration of use.

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Uloga timskog rada u ranom otkrivanju razvojnog poremećaja kuka

Role of teamwork in early detection of developmental dysplasia of the hip

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Apstrakt

Uvod: Razvojni poremećaj kuka (RPK) ili displazija kuka je problem dečijeg uzrasta koji je u našoj pedijatriji prepoznat i relativno rano uključen skrining. Najpre je uveden obavezni klinički, a poslednjih 20 godina se koristi i sonografski skrining kukova. Ovakav pristup u praćenju razvoja koristi se i u evropskim zemljama (Nemačka, Švajcarska), dok se u Americi sonografski pregled radi nakon kliničke sumnje na oboljenje u neonatalnom periodu. Ovo oboljenje je jako kompleksno, te iziskuje čitav tim lekara i medicinskog osoblja koji prate, leče i rehabilituju dete. Tim čine ginekolog/akušer- pedijatar/pedijatriska sestra-patronaža-dečiji ortoped-fizijatar/ fizioterapeut.

Cilj: ovog rada je približiti značaj uloge svake karike tima.

Metodologija i rezultati rada: Savremeno doba i novi izazovi, sve veći broj blizanačkih trudnoća, stil života majke (sedetalni stil, gojaznost, pušenje) vrlo često iziskuju ne samo praćenje, već i održavanje trudnoće, koje se neretko završavaju tzv. carskim rezom, ili vakuum ekstrakcijom- neki su od razloga povećanog rizika pojave oboljenja. Rizični faktori pre rođenja su: karlična prezentacija bebe, prva trudnoća, nedovoljno plodove vode, nenormalan položaj posteljice, genetika (direktno nasleđivanje (majka, otac sestra, brat), porodična predispozicija, ženski pol koji ima pet do osam puta veći rizik za pojavu oboljenja od dečaka. Navike i nega deteta posle rođenja: spavanje na trbuhu koji se više ne savetuje, obavezno široko povijanje. Svaka trudnica obavezna je da obavesti svog ginekologa ukoliko je imala oboljenje ili je lečena u detinjstvu. To usmerava praćenje trudnoće, ali i izbor porođaja. Bebu na rođenju preuzima neonatolog koji radi osnovne kliničke preglede i uzima neophodnu anamnezu o riziku za ovo oboljenje. U mnogim porodilištima uveden je i songrafski skrining. U otpusnoj listi naglašava se rizik bebe za oboljenje. Po dolasku kući bebu obilazi patronažna služba i daje uputstva majci o načinu nege deteta, širokom povijanju bebe. Široko povijanje je revolcionarno promenilo tok oboljenja jer je omogućeno slobodno razvijanje zgloba koji je najintezivniji u prvim mesecima života bebe.Izabrani pedijatar već pri prvom pregledu uzima anamnezu, radi klinički pregled i zakazuje sonografski pregled. Stav pedijatara, ali i radiologa je da sonografiju radi pedijatar i da pri svakoj sumnji na oboljenje hitno konsultuje dečijeg ortopeda. Preporuka je uraditi sistematski pregled novorođenčeta u prve 2 nedelje života. U periodu od 4–6 nedelje života ukoliko nije bilo mogućnosti obavezno uraditi sonografski pregled. Sonografija se gradira po Grafu. Uvodi se i supstitucija vitamina D do prve godine, a dalje po proceni izabranog pedijatra. U slučaju usporene osifikacije povećava se supstitucija vitamina D i prati songrafski na 6–12

Abstract

Introduction: Developmental dysplasia of the hip (DDH) is a problem in the childhood and in our pediatricts it is recognized on time. Mandatory clinical testing was introduced first, and sonographic hip screening has been used for the last 20 years. This approach in monitoring development is also used in European countries (Germany, Switzerland), while in America, the sonographic examination is performed after clinical suspicion of the disease in the neonatal period. This disease is very complex, and requires a whole team of doctors and medical staff who monitor, treat and rehabilitate the child. The team consists of a gynecologist / obstetrician-pediatrician / pediatric nurse-patronage-pediatric orthopedist-physiatrist / physiotherapist.

Aims: the main aim is to explain how important is the role of each team member.

Methodology and results: Some of the reasons are the increasing number of twin pregnancies, the mother`s lifestyle (sedentary lifestyle, obesity, smoking) and they often require not only monitoring, but also maintaining the pregnancy, which often ends in the so-called cesarean section or vacuum extraction. Risk factors before birth are the pelvic presentation of the baby, first pregnancy, low amniotic fluid, abnormal position of the placenta or genetics. Girls are at five to eight time higher risk of developing the disease than boys. Habits and care of the child after birth: sleeping on the stomach, which is no longer advised, wide bending is mandatory. Every pregnant woman should inform her gynecologist if she had a disease or was treated as a child. This directs the monitoring of pregnancy, but also the choice of childbirth. The baby is examined by a neonatologist who performs basic clinical examinations and takes the necessary anamnesis about the risk of this disease. Sonographic screening is also introduced in many maternity hospitals. The discharge list emphasizes the baby's risk of getting the disease. After coming home, the baby is visited by the patronage service and gives instructions to the mother on how to take care of the child, the wide swaddle of the baby. Wide bending has revolutionized the course of the disease because it allows the free development of the joint, which is most intense in the first months of a baby's life. The chosen pediatrician takes the anamnesis at the first examination, performs a clinical examination, and schedules a sonographic examination. According to the opinion of the pediatrician, but also the radiologist, the pediatrician does the sonography and immediately consults a pediatric orthopedist in case of any suspicion of the disease. It is recommended to do a systematic examination of the newborn in the first 2 weeks of life. In the period of 4-6 weeks of life, if there was no possibility,

nedelja. Roditelji se savetuju o značaju izlaganju deteta sunčevoj svetlosti. Lekar savetuje vežbe za jačanje mišića kuka. Kod svake sumnje na oboljenje dečiji ortoped prati i po potrebi leči adekvatnim tretmanima razvojni poremećaj kuka. U težim ali i kasno otkrivenim slučajevima radi se hiruška intervncija. I na kraju ukoliko je oboljenje lečeno hiruškim putem lečenje se nastavlja intenzivnim fizikalno-rehabilitacionim tretmanom.

Zaključak: Značaj ovakvog pristupa u ranoj dijagnostici je otkrivanje bolesti u ranom uzrastu jer od toga zavisi i tok i ishod lečenja. Bez lečenja, oboljenje završava pojavom ranih degenerativnih promena u zglobu kuka, bolovima, hramljanjem i stepenom trajne psihofizičke invalidnosti.

it is obligatory to do a sonographic examination. Sonography is graded by Graf. Vitamin D substitution is introduced until the age of one, and further according to the assessment of the chosen pediatrician. In the case of slow ossification, the substitution of vitamin D increases and is followed sonographically for 6-12 weeks. Parents are advised about the importance of exposing the child to sunlight. The doctor advises exercises to strengthen the hip muscles. In case of any suspicion of the disease, the pediatric orthopedist monitors and, if necessary, treat the developmental disorder of the hip with adequate treatments. In severe but also late discovered cases, surgical intervention is performed. And finally, if the disease is treated surgically, the treatment is continued with intensive physical-rehabilitation treatment.

Conclusion: The importance of this approach in early diagnosis is the detection of the disease at an early age because it depends on the course and outcome of treatment. Without the treatment, the disease ends with the appearance of early degenerative changes in the hip joint, pain, limping, and the degree of permanent psychophysical disability.

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Istine i zablude o uklanjanju mladeža na koži

True facts and misconceptions about removing moles from the skin

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Apstrakt

Mladeži (naevusi) su nakupine pigmentnih ćelije u koži, prisutne kod skoro svih ljudi u manjem ili većem broju. Skoro da nema osobe koja posle tridesete godine nema desetine i više mladeža. Dele se na kongenitalne koje se javljaju odmah na rođenju ili u prvim mesecima života tj. ranom detinjstvu i stečene, koji se viđaju u kasnijem periodima života. Stečeni nevomelanocitni nevusi mogu biti u epidermu (junkcioni nevus), dermu (intradermalni) ili na oba mesta (složeni nevusi). Junkcioni nevusi su najčešće u nivou kože i pod kosim svetlom se uočava minimalna reljefna nepravilnost kože. Intradermalni i složeni se inspekcijom i palpatorno detektuju kao izbočine na koži, glatke ili papilomatozne površine.

Izgled nevusa: obično su to okrugle ili ovalne tamnobraon do smeđe prebojene promene, nekada u boji kože ili čak svetlije od okolne kože, plavo prebojeni itd. Mogu biti znak raspoznavanja tj. obeležje osobe dajući joj autentičnost i šarm ali mogu imati i karakteristiku belega sa negativnom estetskom konotacijom (posebno ako su prostrani i na vidljivim delovima tela, obrasli dlakom, boje crvenog vina ili linerane verukozne strukture).

Nevomelanocitni nevusi mogu početi naglo da se menjaju pod uticajem različitih faktora ko što su sistemski faktori (trudnoća, pubertet, primena sistemskih kortikosteroida) i lokalni činioci koji utiču na nevuse određene regije (izlaganje solarnom zračenju ili bulozne dermatoze): Promena boje, veličine, oblika, površine sa ili bez bola, svrab, ulceracija, krvarenje mogu da ukažu na ozbiljnu dijagnozu u smislu maligne alteracije. Uvođenje dermoskopije u praksu dermatologa omogućilo je bržu i precizniju dijagnozu i ranije otkrivanje zloćudnih tumora kože naročito MM.

Dermoskopija je bezbolna, neinvazivna metoda koja omogućava praćenje uz fotodokumentaciju na 1, 3 ili 6 meseci i analiziranje promene do koje je u međuvremenu došlo, poštujući pravila ABCDE (asimetrija, prekid ivice, višebojnost, diametar > 6mm, evolucija). Uklanjanje nevusa se preporučuje kada je na mestu iritacije, ako je promenio boju ili oblik, ako je povređivan, ako ima nepravilan i asimetričan oblik, nazubljenih ivica i sa višebojnom pigmentacijom, ako su urođeni i veći od 1,5cm i ako krvare, peckaju, bole ili svrbe. Raniji stav da je uklanjanje mladeža može biti opasno dugogodišnje dermatološko iskustvo demantuje. Mogu se ukloniti i potpuno „mirni" i „zdravi" mladeži u slučaju da pacijent ima psihičku fiksaciju i obavlje svakodnevne samopreglede u više navrata. S druge strane izbegavanje pregleda dermatologa i odlaganja zbog „straha da se nesto ne otkrije" je potpuno pogrešno i kosi se sa elementarnom zdravstvenom kulturom. Tzv. konsultacije

Abstract

Moles (nevus) are the accumulations of pigmented cells in the skin, present in almost all people in smaller or larger numbers. There is almost no person who does not have dozens or more moles after the age of thirty. They are divided into congenital ones that appear immediately at birth or in the first months of life or early childhood and acquired, which are seen in later periods of life. Junctional nevi are most often at the level of the skin and under oblique light, a minimal relief irregularity of the skin is noticed. Intradermal and complex are detected by inspection and palpation as protrusions on the skin, smooth or papillomatous surfaces.

The appearance of the nevus: they are usually round or oval, dark brown to brown in color, sometimes in skin color or even lighter than the surrounding skin, blue in color, etc. They can be a sign of recognition - i.e. characteristic of a person giving it authenticity and charm, but they can also have the characteristic of a mark with a negative aesthetic connotation (especially if they are spacious and on visible partial bodies, overgrown with hair, red wine color or linear verrucous structure).

Nevomelanocyte nevi can begin to change abruptly under the influence of various factors such as systemic factors (pregnancy, puberty, systemic corticosteroids) and local factors affecting the nevi of a particular region (exposure to solar radiation or bullous dermatosis): Change in color, size, shape, surfaces with or without pain, itching, ulceration, bleeding may indicate a serious diagnosis in terms of malignant alteration. The introduction of dermoscopy in the practice of dermatologists has enabled faster and more accurate diagnosis and earlier detection of malignant skin tumors, especially MM.(?)

Dermoscopy is a painless, non-invasive method that allows monitoring with photo documentation at 1.3 or 6 months and analyzing the change that has occurred in the meantime, respecting the rules of ABCDE (asymmetry, edge breakage, multicolor, diameter> 6mm, evolution). Removal of the nevus is recommended when it is at the place of irritation if it has changed color or shape if it is injured if it has an irregular and asymmetrical shape, jagged edges, and multicolored pigmentation, if they are congenital and larger than 1.5 cm and if they bleed, sting, pain or itching. The earlier view that removing moles can be dangerous is denied by many years of dermatological experience. Completely "harmless" and "healthy" moles can be removed in case the patient has mental fixation and performs daily self-examinations on several occasions.

na društvenim mrezama i forumima, upoređivanje simtoma i nesmotreni saveti mogu biti ništa manje opasni od starinskog, narodnog verovanja da se mladež ne dira ili se „leči" različitim melemima, kausticima ili kiselinama.

Zaključak: Za sve nove promene na koži ili stare koje se menjaju, treba se javiti dermatologu i obaviti klinički i dermoskopski pregled. Pregled dermatologa podrazumeva gledanje čitave kože a ne „na parče", uzimanje pravilne anamneze o dužini simptoma, familijarnoj anamnezi, davanje saveta o samopregledu, fotoprotekciji, preporuka da se nevusi u zonama iritacije (pojasno, predeo brushaltera, tabani, brada kod muškaraca, baza vrata zbog nakita, akralna lokalizacija,tamno pigmentna promena na svetloj regiji kože „*de novo*") uklone, jesu preduslov da mnoge životne priče traju duže i lepše.

On the other hand, avoiding dermatologist examinations and delays due to the fear that "something might be discovered" is completely wrong and contradicts the elementary health culture. The so-called consultations on social networks and forums, comparison of the symptoms, and reckless advice can be equally dangerous as the old-fashioned, popular belief that moles are not to be touched or "treated" with various balms, caustics, or acids.

Conclusion: For all new changes in the skin or old ones that are changing, you should contact a dermatologist and perform a clinical and dermoscopic examination. Dermatologist examination means looking at the whole skin and not "in pieces", taking a correct case history of symptom length, family history, giving advice on self-examination, photoprotection, recommendation to remove nevi in areas of irritation (waistband, bra area, soles, chin in men, neck base for jewelry, acral localization, dark pigment change on the light region of the skin "de novo"). These are prerequisites for many life stories to be better and last longer.

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Planirana nabavka i bezbedno čuvanje vakcina
Planned purchase and safe storage of the vaccines

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Apstrakt

Uvod: Vakcine se uz antibiotike smatraju najvećim dostignućem medicine, što pomaže da čovečanstvo kontroliše većinu zaraznih bolesti. Koliko god čitali u tabloidima o katastrofalnim epidemijama, one se odavno nisu desile. Obavezna, redovna imunizacija je imunizacija lica određenog uzrasta, kao i drugih lica određenih zakonom, koju lice koje treba da se imunizuje treba da se imunizuje, kao ni roditelj, odnosno staratelj ne može da odbije, osim u slučaju postojanja medicinske privremene ili trajne kontraindikacije Koju utvrđuje doktor medicine odgovarajuće specijalnosti ili stručni tim za kontraindikacije.

Cilj rada je planirana nabavka i bezbedno čuvanje vakcina:

Materijal i metoda rada: Nabavka vakcine mora biti blagovremena, trebovanje u skladu sa izrađenim planom imunizacije, pri čemu je neophodno voditi računa o broju pozvane dece, zalihama vakcina i rasturu:
– 10% za DPT, DT, tD;
– 30% za OPV
– 50% za BCG

Na svakom vakcinalnom punktu potreno je odrediti osobu koja će biti odgovorna za čuvanje vakcina, poštovanje hladnog lanca transporta. „Hladan lanac" čuvanja i transporta praćen je adekvatnom medicinskom dokumentacijom, postoji evidencija o preuzetim vakcinama i serijskom broju svake pojedinačne i višedozne bočice vakcina. Transport vakcina do vakcinalnog punkta i pribor za transport je adekvatan (namenski ručni frižider sa PVC patronama i termometrom – gde su patrone i vakcine razdvojene). Vakcine se čuvaju u frižideru na temperaturi „hladnog lanca" od +2 do +8°C, što prati adekvatna medicinska dokumentacija.

Problemi koji mogu nastati i mere koje je potrebno preduzeti:

Ako su vakcine bile izložene temperaturama van dozvoljenog opsega, odvajaju se od ostalih, obeležavaju se etiketom „NE KORISTITI" i traži se savet od nadležnih državnih ustanova ili od proizvođača.

Postupak sa oštećenim bočicama vakcina:
– ne bacati ih pre kontakta s nadređenima,
– radi zaštite od svetlosti, čuvati vakcine i rastvarače u originalnom pakovanju,
– ne stavljati vakcine sličnog naziva ili izgleda jedne uz druge,
– rastvarače čuvati u frižideru, nikada ih ne ostavljati u zamrzivaču, najbolje je da, kad je moguće stoje uz odgovarajuće vakcine.

Jednom izgubljena potentnost vakcine pri izlaganju neadekvatnoj temperaturi ne može se vratiti povratkom vakcine u adekvatne uslove čuvanja. Mrtve, inaktivisane vakcine (DTP, DT, Td, TT, hepatitis B, HiB, DtaP) se ne smeju zamrzavati, jer već temperatura +1°C može umanjiti njihovu imunogenost zbog fizičko hemijske promene antigena. Žive vakcine (OPV,

Abstract

Introduction: In addition to antibiotics, vaccines are considered to be the greatest achievement of medicine, which helps humanity control most infectious diseases. No matter how much you read in the tabloids about catastrophic epidemics, they haven't happened for a long time. Mandatory, regular immunization is the immunization of a person of a certain age, as well as other persons determined by law, which the person to be immunized, should be immunized, as well as the parent or guardian can not refuse unless there is a medical temporary or permanent contraindication. determined by a doctor of medicine of the appropriate specialty or an expert team for contraindications.

Aims of the research: Planned purchase and sade storage of the vaccines

Materials and methods: Vaccine procurement must be timely, requiring in accordance with the developed immunization plan, where it is necessary to take into account the number of invited children, vaccine stocks, and distribution:
– 10% for DPT, DT, tD;
– 30% for OPV
– 50% for BCG

At each vaccination point, it is necessary to determine the person who will be responsible for storing the vaccines, respecting the cold chain of transport. The "cold chain" of storage and transport is accompanied by adequate medical documentation, there is a record of vaccines taken and the serial number of each individual and a multi-dose vial of the vaccine. Transport of vaccines to the vaccination point and transport accessories is adequate (dedicated handheld refrigerator with PVC cartridges and thermometer - where cartridges and vaccines are separated). Vaccines are stored in the refrigerator at a "cold chain" temperature of +2 to + 8 ° C, which is accompanied by adequate medical documentation.

Problems that may arise and measures to be taken:

If the vaccines have been exposed to temperatures outside the permitted range, they are separated from the others, marked with the label "DO NOT USE" and advice is sought from the competent state authority or from the manufacturer.

The procedure with damaged vaccine vials:
– do not throw them away before contact with superiors,
– for protection against light, store vaccines and solvents in the original packaging,
– do not put vaccines of similar name or appearance next to each other,
– Store the solvents in the refrigerator, never leave them in the freezer, it is best to stand with appropriate vaccines when possible.

MMR) mogu biti zamrznute onoliko dugo, koliko dozvoljava proizvođač. Žive vakcine čuvaju se uz zadnji zid frižidera, veoma su osetljive na povišenu temperaturu. vakcine se čuvaju u središtu frižidera, ne u vratima,obezbeđen je i alternativni način očuvanja, potrebne temperature u frižideru u slučaju nestanka struje (npr. agregat ili zamrznute flaše vode koje bi se pri nestanku struje stavile u središte frižidera).

Zaključak: Instituti i Zavodi za javno zravlje vrše nadzor nad celom procedurom izvođenja imunizacije. Inspekcijski nadzor nad hladnim lancem vakcina sprovodi organ nadležan za poslove sanitarnog nadzora. (čl. 73, stav 9 Zakona – sanitarni inspektor ima pravo i dužnost da zabrani dalju distribuciju vakcine ili imunološkog preparata ako se utvrdi da se prilkom njihovog transporta ili čuvanja nije se pridržavalo principa hladnog lanca).

Once the potential of the vaccine is lost when exposed to inadequate temperature, the return vaccine cannot be returned to adequate storage conditions. Dead, inactivated vaccines (DTP, DT, Td, TT, hepatitis B, HiB, DtaP) must not be frozen, because a temperature of + 1 ° C can reduce their immunogenicity due to the Physico-chemical change of the antigen. Live vaccines (OPV, MMR) can be frozen for as long as the manufacturer allows. Live vaccines are stored in the back wall refrigerator, they are very sensitive to elevated temperature. vaccines are stored in the center of the refrigerator, not in the door, an alternative method of preservation is provided, the required temperature in the refrigerator in case of power failure (eg generator or frozen water bottles that would be placed in the center of the refrigerator).

Conclusion: Institutes and Institutes of Public Health supervise the entire immunization procedure. Inspection supervision over the cold chain of vaccines is carried out by the body in charge of sanitary supervision (clause 73, paragraph 9 of the law - the sanitary inspector has the right and duty to prohibit further distribution of the vaccine or immunological preparation if it is determined that the principle of the cold chain was not observed during their transport or storage).

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APSTRAKT 20S 2020; 1(2): 75–75 ABSTRACT 20E

Intervalni fizički trening
Interval physical training

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Apstrakt

Uvod: Intervalni fizički trening je svetski trend. Predstavlja aerobnu fizičku aktivnost tokom koje se smenjuju intervali manjeg i većeg inteziteta fizičke aktivnosti (kratki intervali intezivne aktivnosti i duži intervali manje aktivnosti).

Cilj rada: Ukazati na prednosti intervalnog fizičkog treninga, kao i povoljne efekte novih modaliteta fizičkog treninga (hidrokineziterapija, vežbe snage) u rehabilitaciji kardiovaskularnih bolesnika.

Metodologija: Za postizanje korisnog efekta fizičkog treninga u rehabilitaciji kardiovaskularnih bolesnika kombinovani su standardni modaliteti fizičkog treninga (vežbe, hodanje, ergometar bicikl) i novi modaliteti fizičkg treninga (hidrokineziterapija, vežbe sa eksternim opterećenjem), u vidu intervalnog tipa fizičkog treninga.

Rezultati: Istraživanja su pokazala da pravilna, individualno dozirana, kontrolisana fizička aktivnost intervalnog tipa ima snažan koristan efekat kako u rehabilitaciji kardiovaskularnih bolesnika, tako i u prevenciji i lečenju istih. Novi modaliteti fizičkog treninga hidrokineziterapija i vežbe sa eksternim opterećenjem daju pozitivne efekte na kardiovaskularni sistem, opštu kondiciju, redukciju faktora rizika i psihološki status pacijenata.

Zaključak: Rehabilitacioni programi fizičkog treninga u kojima se kombinuju standardni modaliteti fizičkog treninga sa novim modalitetima (hidrokineziterapija i vežbe sa eksternim opterećenjem) predstavljaju siguran vid fizičkog treninga za kardiovaskularne bolesnike. Dozirana i kontrolisan fizička aktivnost intervalnog tipa smanjuje rizik nastanka neželjenih događaja u toku fizičkog treninga i mortalitet kardiovaskularnih pacijenata.

Abstract

Introduction: Interval physical training is a worldwide trend. It represents aerobic physical activity during which intervals of lower and higher intensity of physical activity alternate (short intervals of intensive activity and longer intervals of lower activity).

Aims: Specify the advantages of interval physical training, as well as the beneficial effects of new modalities of physical training (hydrokinesitherapy, strength exercises) in the rehabilitation of cardiovascular patients.

Methodology: To achieve the beneficial effect of physical training in the rehabilitation of cardiovascular patients, standard modalities of physical training (exercises, walking, ergometer bicycle) and new modalities of physical training (hydrokinesitherapy, exercises with external load) are combined, in the form of interval type of physical training.

Results: Research has shown that proper, individually dosed, controlled interval-type physical activity has a strong beneficial effect both in the rehabilitation of cardiovascular patients and in their prevention and treatment. New modalities of physical training, hydrokinesitherapy, and exercises with external load give positive effects on the cardiovascular system, general condition, reduction of risk factors, and the psychological status of patients.

Conclusion: Rehabilitation programs of physical training in which standard modalities of physical training are combined with new modalities (hydrokinesitherapy and exercises with external load) represent a safe type of physical training for cardiovascular patients. Dosed and controlled interval-type physical activity reduces the risk of adverse events during physical training and mortality in cardiovascular patients.

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APSTRAKT 21S 2020; 1(2): 76–76 ABSTRACT 21E

Značaj uloge medicinske sestre/tehničara kod laringektomisanih pacijenata

Role and significance of nurses and technicians for laryngectomized patients

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Apstrakt

Uvod: U vertikalnoj osovini larinks se može podeliti na tri sprata i to supraglotis, glotis i subglotis, pri čemu svaki od ovih spratova ima svoje subregione, a u horizontalnoj ravni larinks se deli na levi i desni hemilarinks. Subregioni larinksa su larinksna površina epiglotisa, ariepiglotisni nabori, aritenoidni nabori, ventrikularni nabori, Morganijevi recesusi, glasnice sa prednjom i zadnjom komisurom i subglotisni subregion. Osnovne funkcije ovog organa su respiracijska, zaštitna, degluticijska i fonatorna. Prema obimu resekcije hirurgija larinksnih malignoma se može podeliti na konzervacijske, parcijalne i totalne laringektomije, kao i na palijativnu hirurgiju larinksa. Vrlo često laringektomiji prethodi hirurška traheotomija zbog uspostavljanja suficijentne disajne funkcije, koja može biti hitna i elektivna. Komplikacije nakon laringektomija mogu biti rane: krvarenje, infekcija, aspiracijska bronhopenumonija i kasne: hipofarinksne i larinksne stenoze, faringokutana fistula, rest-recidiva malignoma.

Cilj: Upoznavanje sa anatomijom, fiziologijom, patologijom i hirurgijom larinksa je najvažniji preduslov za kvalitetno sprovođenje specijalne nege laringektomisanih pacijenata.

Metod: retrospektivna studija, u periodu od 2000-2019, obuhvaćeni pacijenti operisani na Klinici za ORL KC „Kragujevac".

Rezultati: Na osnovu dvodecenijskog iskustva izneseni su osnovni principi preoperativne i postoperativne nege laringektomisanih pacijenta, kao i principi nege kod nastalih komplikacija.

Zaključak: Dobrom edukacijom i solidnom praksom mogu se postići najviši sandarda u domenu preoperativne i postoperativne nege pacijenata sa malignomom larinksa. Neophodna su i znanja iz opšte nege bolesnika, kao i izvestan stepen posvećenosti ovom zanimanju. Timski rad medicinske sestre/tehničara sa laringealnim hirurgom, psihologom i fonijatrom predstavlja zlatni standard u tretmanu ovih pacijenata.

Abstract

Introduction: In the vertical axis, the larynx can be divided into three floors, namely the supraglottis, glottis, and subglottis, each of which has its own subregions. In the horizontal plane, the larynx is divided into left and right hemilarynx. The laryngeal subregions are the laryngeal surface of the epiglottis, the aryepiglottic folds, the arytenoid folds, the ventricular folds, the Morgan recesses, the vocal cords with the anterior and posterior commissures, and the subglottic subregion. The basic functions of this organ are respiratory, protective, deglutational, and phonatory. According to the scope of resection, laryngeal malignancy surgery can be divided into conservation, partial and total laryngectomies, as well as palliative laryngeal surgery. Very often laryngectomy is preceded by a surgical tracheotomy due to the establishment of a sufficient respiratory function, which can be urgent and elective. Complications after laryngectomy can be early: bleeding, infection, aspiration bronchopneumonia, and late: hypopharyngeal and laryngeal stenosis, pharyngocutaneous fistula, rest-recurrence of malignancy.

Aims: Introduction to the anatomy, physiology, pathology, and surgery of the larynx is the most important prerequisite for the quality of special care of laryngectomized patients.

Methods: retrospective study, in the period from 2000-2019, included patients operated on at the Clinic for ENT KC "Kragujevac"

Results: Based on two decades of experience, the basic principles of preoperative and postoperative care of laryngectomized patients are presented, as well as the principles of care for complications.

Conclusion: With good education and solid practice, the highest standards in the field of preoperative and postoperative care of patients with laryngeal malignancy can be achieved. Knowledge of general patient care is also necessary, as well as a certain degree of commitment to this profession. The teamwork of a nurse / technician with a laryngeal surgeon, psychologist and phoniatrician is the gold standard in the treatment of these patients.

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Premedikacija i lečenje rizičnih pacijenata u stomatologiji

Premedication and treatment of high-risk patients in dentistry

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Apstrakt

Uvod: Već više decenija kardiovaskularne bolesti (bolesti srca i krvnih sudova) su najrasprostranija oboljenja kod ljudi, a po mortalitetu (stepen smrtnosti) su na prvom mestu. Obzirom na njihovu učestalost, sasvim je razumljivo da je tih bolesnika svakim danom sve više i u stomatološkim ordinacijama. Oni predstavljaju značajnu grupaciju rizičnih pacijenata, čije narušeno zdravlje zahteva opreznost i u određenim situacijama poseban tretman prilikom zahvata u usnoj duplji. Brojna su i različito teška oboljenja srca i krvnih sudova. U ovom radu biće reči samo o onim kardiovaskularnim bolesnicima, koji najčešće dolaze kod stomatologa i imaju neku od sledećih bolesti: arterijsku hipertemziju, anginu pektoris i infarkt miokarda. Sa stomatološke tačke gledišta veoma je važno uočiti komplikacije koje mogu nastati u toku rada kod pacijenata sa povišenim krvnim pritiskom, posebno tokom oralno hiruruških intervenija. Akutno povećanje krvnog pritiska je najznačajninija komplikacija sa mogućim neželjenim posedicama nastalog stanja. Stres i stanje straha dovode do povećanja lučenja nekih supstanci nadbubrežnih žlezda (tzv. endogeni kateholamini) koji pogoršavaju osnovnu bolest, zatim sastavni deo samog anestetika (egzogeni kateholamin), pa čak i neke protetske faze u kojima se koristi konac za retrakciju gingive, mogu dovesti do naglog skoka krvnog pritiska, sa eventualnim posledicama, istina, izuzetno retkim, kao što su: glavobolja, muka, povraćanje, konfuzija, pa mnogo teže – angina pektoris i još teže – infarkt miokarda, sve do zastoja.

Cilj rada: Ovaj rad ima za cilj da pruži kratak osvrt na postupke i mere koje stomatolog treba da ima u vidu kada zbrinjava pacijente koji imaju neko od kardiovaskularnih oboljenja kao i strah od odlaska kod stomatologa i mere koje primenjuje za smanjivanje straha i bola kod pacijeenta, a samim tim olakšati svaku sledećuu posetu stomatologu.

Metoda rada: Istraživanje je realizovano u Stomatološkoj službi Doma zdravlja Požarevac u toku 2018. i početkom 2019. god. godine, kroz razne razgovore sa pacijentima, uvidom u medicinsku dokumentaciju kao i kroz lično radno iskustvo.

Rezultati: Upoznavanje sa značajem redovnih poseta stomatologu radi prevencije bolesti zuba i usta. Ozbiljni su problemi sa kojima se stomatolog susreće u lečenju ovih pacijenta, zbog njihovog izraženog straha od odlaska stomatologu. Dobijeni rezultati ukazuju na smanjenje broja pacijenata koji imaju strah usled pojave sve većeg broja anestetika koji se primenjuju, a i pojave da odlazak prvo psihologu i psihijatru nije više bauk.

Abstract

Introduction: For several decades, cardiovascular diseases (heart and blood vessel diseases) have been the most common diseases, and in terms of mortality (mortality rate), they are in the first place. Given their frequency, it is quite understandable that these patients can be seen in dental offices more and more often. They represent a significant group of high-risk patients, whose impaired health requires caution and, in certain situations, special treatment during the dental procedure. There are numerous and severe heart and blood vessel diseases. In this paper, we will talk only about those cardiovascular patients, who most often come to the dentist and have one of the following diseases: arterial hypertension, angina pectoris, and myocardial infarction. From the dentist`s point of view, it is very important to notice complications that can occur during work in patients with high blood pressure, especially during oral surgical interventions. An acute increase in blood pressure is the most significant complication with possible unwanted effects of the condition. Stress and fear lead to an increase in the secretion of some adrenal substances (so-called endogenous catecholamines) that worsen the underlying disease, then an integral part of the anesthetic (exogenous catecholamine), and even some prosthetic stages in which suture is used to retract the gingiva might also lead to a sudden jump in blood pressure, with possible consequences such as headache, nausea, vomiting, confusion, and much more severe - angina pectoris and even more severe - myocardial infarction, all the way to stasis.

Aims: This paper aims to provide a brief overview of the procedures and measures that a dentist should keep in mind when caring for patients with any of the cardiovascular diseases as well as the fear of going to the dentist and the measures he uses to reduce fear and pain in the patient. In that way, they facilitate the next visit of the patient.

Methods: The research was realized in the Dental Service of the Health Center Pozarevac during 2018 and the beginning of 2019, through various conversations with patients, medical documentation as well as through personal work experience.

Results: Introduction to the importance of regular visits to the dentist for the prevention of dental and oral diseases. The problems that the dentist encounters in the treatment of these patients are serious, due to their pronounced fear of going to the dentist. The obtained results indicate a decrease in the number of patients who are afraid due to the appearance of an increasing number of anesthetics that are used, and also the appearance that going to a psychologist and psychiatrist first is no longer a nightmare.

Zaključak: Savremene mogućnosti suzbijanja bola omogućuju potpuni komfor pacijenta pri stomatološkom zbrinjavanju. Moram da naglasim da ovaj komfor nije bitan zbog toga što pacijenti, u današnjim uslovima, često plaćaju stomatološke usluge pa, stoga, zahtevaju i određene „privilegije". Komfor u stomatološkoj ordinaciji je prvenstveno bitan zbog zdravstvenih razloga, zbog suzbijanja stresa. Jer, u svesti mnogih ljudi, pojam stomatološke intervencije još uvek asocira na veoma neprijatan i prvenstveno bolan doživljaj, što znači da su oni već pod stresom pri dolasku u stomatološku ordinaciju. Stoga je jedan od osnovnih principa savremene stomatološke prakse suzbijanje i potpuna eliminacija bola koji bi sama intervencija mogla da izazove, a samim tim i suzbijanje stresa.

Conclusion: Modern possibilities of pain control enable complete comfort of the patient during dental care. I must emphasize that this comfort is not only important because patients, in today's conditions, often pay for dental services and, therefore, demand certain benefits. Comfort in the dental office is primarily important for health reasons and to combat stress. Because, in the minds of many people, the notion of dental intervention is still associated with a very unpleasant and painful experience, which means that they are already under stress when they come to the dental office. Therefore, one of the basic principles of modern dental practice is the suppression and complete elimination of pain that the intervention itself could cause, and thus the suppression of stress.

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Profesionalni stres i mere prevencije
Professional stress and preventive mesures

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Apstrakt

Različite su definicije stresora i stresa i načini kako dolazi do nastajanja stresa. Stres je sklop emocionalnih, telesnih (fizioloških) i bihevioralnih reakcija (reakcija ponašanja), do kojih dolazi kada neki događaj procenimo opasnim ili uznemirujućim. Događaj ili niz događaja za koje procenjujemo da ugrožavaju naš život ili nama dragih ljudi nazivamo stresor. Stres je unutrašnji osećaj.

Najveća pažnja se usmerava na profesionalni stres. Na njegovo nastajanje utiče: stav radnika prema uslovima rada, tehnološki proces rada, međuljudski odnosi, neadekvatna uloga pri radu, karijera i radni uslovi. U odnosu na vrstu faktora koji deluju na organizam i izazivaju stresnu reakciju stres može biti: fizički, biološki i fiziološki, psihološki i socijalni. Situacija stresa se stvara kada se „poklopi" okolina puna izazova i pojedinac koji je osetljiv. Kod dugotrajnog izlaganja stresora na poslu može doći do nastanka fenomena „sagorevanja na poslu" U razvoju stresa se razlikuju tri faze: faza alarma, faza mobilizacije, faza sloma. Prema simptomima razlikuju se akutni i hroničan stres koji nastaje nakon dugotrajnog povećanja hormona stresa. Stres predstavlja veliku opasnost po zdravlje radnika. Profesionalni stres ili stres na poslu je fizički ili emocionalni odgovor koji nastaje kada zahtevi radnog mesta nisu u skladu sa mogućnostima i potrebama organizma, što može usloviti nastanak bolesti ili povrede.

Cilj je da se mere prevencije profesionalnog stresa sprovode na nivou radnika, radne organizacije, i na mere van radne organizacije.

U zaključku se konstatuje da je fenomen stresa povezan sa poslom dobio zabrinjavajuće dimenzije u celom svetu. Prema ispitivanju Evropske Agencije za sigurnost na radu i zaštitu zdravlja, stres na radnom mestu se javlja kod svakog trećeg zaposlenog Evropske Unije. Druge ljude sa kojima imamo profesionalne odnose ne možemo menjati, ali, Vi ste ti koji odlučujete možete li prihvatiti druge kakvi jesu, i izvući najbolje iz toga, ili ćete istrošiti svou energiju na pokušaj menjanja drugih, što je još na početku osuđeno na neuspeh.

Abstract

There are different definitions of stressors and stress and the ways in which stress occurs. Stress is a set of emotional, physical (physiological), and behavioral reactions (behavioral reactions), which occur when we assess an event as dangerous or disturbing. An event or series of events that estimated to endanger our lives or our beloved people's lives is called a stressor. Stress is an inner feeling.

The greatest attention is focused on professional stress. Its emergence is influenced by the attitude of employees towards working conditions, technological work processes, interpersonal relationships, inadequate role in work, career, and working conditions. In relation to the type of factors that act on the organism and cause a stress reaction, stress can be: physical, biological, and physiological, psychological and social. A situation of stress is created when an environment full of challenges and an individual who is sensitive "matches". Prolonged exposure to stressors at work can lead to the phenomenon of "burnout at work". There are three phases in the development of stress: the alarm phase, the mobilization phase, and the breakdown phase. According to the symptoms, there are acute and chronic stress that occurs after a long-term increase in stress hormones. Stress poses a great danger to the health of workers. Occupational stress or stress at work is a physical or emotional response that occurs when the demands of the workplace are not in alinement with the capabilities and needs of the organism, which can lead to illness or injury.

The aim is to implement occupational stress prevention measures at the level of workers, work organizations, and measures outside the work organization.

In conclusion, it is stated that the phenomenon of stress related to work has become present all over the world. According to a survey by the European Agency for Safety and Health at Work, the stress in the workplace occurs in every third employee of the European Union. We cannot change other people with whom we have professional relationships, but you are the one who decides whether you can accept others as they are and get the best out of it, or you will spend your energy trying to change others, which is doomed to failure.

Internacionalni medicinski časopis iz oblasti biomedicinskih nauka International medical journal in the field of biomedical sciences
Medicinska reč **Medical Word**

APSTRAKT 24S 2020; 1(2): 80–80 ABSTRACT 24E

Princip zbrinjavanja obolelih od sepse
Priniciple of treating patients with sepsis

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Apstrakt

Uvod: I pored mnogih diskusija oko definicije sepse, svi autori se slažu da je obavezno prisustvo bakterija u krvotoku, koje može proticati sa ili bez simptoma. Bakterijemija znači prisutnost živih bakterija u krvi. Infekcija je karakterističan upalni odgovor na prisustvo ili invaziju mikroorganizama normalno sterilnih tkiva domaćina. Sepsa se može javiti u svim životnim dobima. Javlja se kod 1-2% svih hospitalizovanih i oko 25% kod bolesnika na odeljenju IN, gde predstavlja glavni uzrok smrti.U svetu se stopa smrtnosti na odeljenjima IN kreće oko 20%, kod sepse do 40%, kod septičnog šoka > 60% . Sepsa je klinički pojam koji se najčešće koristi da opiše bakterijemiju sa kliničkim manifestacijama teške infekcije, praćene simptomima i znacima trovanja, drhtavicom, malaksalošću, visokom temperaturom i veoma niskim krvnim pritiskom. Nastaje kada zapaljenski odgovor organizma na infekcije postaje generalizovan i proširi se na zdrava tkiva koja su udaljena od mesta oštećenja ili infekcije.

Cilj rada: Odrediti jasne prioritete u strategiji razvoja i strategiji kontrole kvaliteta obolelih od sepse.

Metoda rada: Lično iskustvo u radu, uvid u medicinsku dokumentaciju OB Požarevac.

Rezultati rada: To je vodeći problem medicine u 21. veku, globalni problem, ograničava mogućnosti u lečenju, zahteva ulaganje i zajedničke napore prilikom sprečavanja širenja infekcije, kontrole upotrebe antibiotika, pojave rezistencije i velikih posledica. Ishod sepse, kao i posledice ozbiljne infekcije, zavise od više faktora. Prijem pacijenta u JIN vrši se u cilju zbrinjavanja, specijalne nege i pojačanog stručnog nadzora.

Zaključak: Opšti principi pri zbrinjavanju obolelih sprovode se: u svim starosnim dobima,u toku rane prevencije, dijagnostike, lečenja i rehabilitacije, na svim nivoima zdravstvene zaštite. Specifični principi u zbinjavanju obolelih od sepse su uslovi dobre prakse prilikom Planiranja mera i aktivnosti u zdravstvenoj nezi, koja se sprovodi radi postizanja što kvalitetnijih pacijentovih ciljeva.

Abstract

Introduction: Despite many discussions about the definition of sepsis, all authors agree that the presence of bacteria in the bloodstream always exists, which can occur with or without symptoms. Bacteremia means the presence of live bacteria in the blood. Infection is a characteristic inflammatory response to the presence or invasion of microorganisms by normally sterile host tissues. Sepsis can occur at any age. It occurs in 1-2% of all hospitalized and about 25% in patients in the IN ward, where it is the leading cause of death. Worldwide, the mortality rate in IN departments is around 20%, in sepsis up to 40%, in septic shock> 60%. Sepsis is a clinical term most commonly used to describe bacteremia with clinical manifestations of severe infection, accompanied by symptoms and signs of poisoning, shivering, malaise, high fever, and very low blood pressure. It occurs when the body's inflammatory response to infections becomes generalized and spreads to healthy tissues that are far from the site of damage or infection.

Aims: To determine clear priorities in the development strategy and quality control strategy for patients with sepsis.

Methods: Personal work experience, insight into the medical documentation of GH Požarevac.

Results: It is the leading problem of medicine in the 21st century, it is a global problem and it also limits the possibilities in treatment, requires investment and joint efforts in preventing the spread of infection, controlling the use of antibiotics, the emergence of resistance and great consequences. The outcome of sepsis, as well as the consequences of a serious infection, depend on several factors. Admission of patients to JIN is done for the purpose of care, special care and enhanced professional supervision.

Conclusion: General principles in the care of patients are implemented at all ages, during early prevention, diagnosis, treatment, and rehabilitation, at all levels of health care. Specific principles in the treatment of patients with sepsis are the conditions of good practice in planning measures and activities in health care, which is carried out in order to achieve the goals.

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Medicinska reč **Medical Word**

APSTRAKT 25S 2020; 1(2): 81–81 ABSTRACT 25E

Zdrav paradoncijum – ključ dobre fiksne protetike
Healthy peridontium – the key of quality prosthetics

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Apstrakt

Današnja stomatološka praksa je sve više okrenuta ka estetici. Sve češće nam se pacijenti obraćaju usred nezadovoljstva svojim osmehom. Naravno savremena stomatološka protetika nudi širok dijapazon rešenja i materijala za postizanje vrhunske estetike. Na žalost od današnje stomatologije očekuju što brže rešenje, pa se neretko desi da se pristupi izradi estetskih nadoknada bez adekvatne pripreme.

Parodontopatija kao najčešće oralno oboljenje i predstavlja jedan od razloga javljanje pacijenata na pregled. Često čujemo da se pacijentima ne sviđa to „što su im se povukle desni". Razlog tome je naravno parodontopatija i mukogingivalne anomalije. Svakodnevno se u praksi susrećemo sa radovima kojima je pokušano „maskiranje" ovakvih funkcionalno estetskih nedostataka.

Ovakvim pristupom i pravljenjem kompromisa sa pacijentima nailazimo na niz problema u toku samog rada i na veliki broj postoperativnih komplikacija. Usled neadekvatne terapije i odsustva preprotetske pripreme nailazimo na nemogućnost uzimanja dobrog otiska što dovodi do neadekvatne protetike i samim tim do jatrogeno izazvanih oboljennja mekih tkiva.

Samo zdrav parodoncijum i pravilno pripremljen gingivalni sulkus daju dobru osnovu za precizan otisak, dobre protetske radove i samo tako ćemo ispoštovati osnovni postulat „*Primum non nocere*".

Abstract

Today's dental practice is increasingly oriented towards aesthetics. More and more often, patients ask for help in the middle of dissatisfaction with their smiles. Of course, modern dental prosthetics offer a wide range of solutions and materials to achieve superior aesthetics. Unfortunately, a solution is expected as soon as possible, so it often happens that aesthetic restorations are made without adequate preparation.

Periodontitis is the most common oral disease and it is one of the reasons why patients set up appointments. We often hear that our patients do not like that "their gums have receded". The reason for this is of course periodontitis and mucogingival anomalies. Every day in practice we come across works that try to "cover" such functional and aesthetic shortcomings.

With this approach and making compromises with patients, we encounter a number of problems during the work itself and a large number of postoperative complications. Due to inadequate therapy and the absence of orthodontic preparation, we encounter the impossibility of taking a good impression, which leads to inadequate prosthetics and thus to iatrogenic soft tissue diseases.

Only a healthy periodontium and a properly prepared gingival sulcus provide a good basis for an accurate print, good prosthetic works, and only in this way will we respect the basic postulate "Primum non nocere".

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Medicinska reč **Medical Word**

APSTRAKT 26S 2020; 1(2): 82–82 ABSTRACT 26E

Izlazni profil implanta – ulazna karta za uspijeh protetske nadoknade

Implant output profile – significant for the success in prosthetic compensation

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Apstrakt

Već odavno se uspjeh implanto-protetske terapije ne može svesti isključivo na oseointegraciju implantata. Odgovarajuća pozicija implantata, a zatim i izrada adekvatne protetske nadoknade u funkcionalno-estetskom smislu determinišu naš rad kao dugoročno uspješan ili neuspješan.

Za protetsku nadoknadu na implantatu od suštinskog je značaja formiranje izlaznog profila, procedura kojom se kroz meka tkiva vrši tranzicija - od neprirodnog cirkularnog presjeka implantata do krunice koja će u potpunosti zadovoljavati sve potrebne funkcionalno-estetske aspekte protetske nadoknade na implantatu.

Rad ima za cilj najprije da upozna slušaoce sa konceptom izlaznog profila implantat,. a zatim da kroz primjere predstavi tehnike kreiranja odgovarajućeg izlaznog profila kao i da evaluira njihov značaj za dugotrajnost i ukupan uspjeh implanto-protetske terapije.

Abstract

Implant-prosthetic therapy cannot be based only on the osseointegration of implants. The appropriate position of the implant, and then the production of adequate prosthetic replacement in the functional-aesthetic sense, determines our work as successful or unsuccessful in the long term.

For prosthetic replacement on the implant, it is important to form an output profile, a procedure that transitions through soft tissues - from an unnatural circular section of the implant to a crown that will fully satisfy all the necessary functional and aesthetic aspects of prosthetic replacement on the implant.

The paper aims to introduce the students to the concept of implant output profile. And then to present the techniques of creating an appropriate output profile through examples as well as to evaluate their significance for the longevity and overall success of implant-prosthetic therapy.

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APSTRAKT 27S 2020; 1(2): 83–83 ABSTRACT 27E

Bol kao značajan dijagnostički podatak
Pain as a significant part of diagnostic data

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Apstrakt

Bol je subjektivno, neprijatno opažanje i osećaj, koji se može javiti usled oštećenja tkiva, njegovog predstojećeg oštećenja, ili usled psiholoških uzroka. Javlja se gotovo kod svih bolesti i povreda. To je zaštitni mehanizam čija je funkcija da organizam postane svestan opasnosti i reaguje kako bi uklonio bolni nadražaj, međutim ukoliko se bolni nadražaj ne može ukoniti onda se javlja hronični bol koji nema više zaštitnu funkciju, već dodatno opterećuje obolelog.

Bol kod neurološkog bolesnika istovremeno može ukazivati na aktuelne neurološke probleme ali istovremeneo i na potencijalno životno ugrožavajuća stanja, koja nisu neurološka. Upravo zbog povećane učestalosti komorbiditeta kod neurološkog pacijenta moramo istaći značaj posmatranja pacijenta kao i evaluaciju bola od starane medicinski sestara tehničara.

Ako bol klasifikujemo prema organima i sistemima organa svakako moramo uzeti u obzir i neke druge okolnosti koje ne potiču iz samog organa ili sistema organa a koja mogu da pojačavaju ili da uzrokuju bol. Tako, glavobolja koja je najčešći subjektivni osećaj kod neurološkog bolesnika može biti uzrokovana nekim patološim supstratom ili nekim patološkim procesom npr. u ranoj fazi hemoragije ali isto tako i manje značajnijim stanjima. Tako na primer imamo izrazitu glavobolju kod moždanog udara u fazi oporavka gde se ne potvrđuje ni jedan drugi razlog već bol uzrokovan kontrakturama mišića vrata usled dugog ležanja.

Posmatranje pacijenta, procena stanja pacijenta, detektovanje bola, evaluacija bola presdtavaju poseban entitet u zdravstvenoj nezi neurološkog bolesnika. Upravo zbog toga iz višedecenijskog iskustva prikazaću primerima iz prakse najčešće razloge bola kod neurološkog pacijenta koja primarno nisu bila uzrokovana akutnom ili hroničnom neurološkom bolešću.

Abstract

Pain is a subjective, unpleasant perception and feeling, which can occur due to tissue damage, its impending damage, or due to psychological causes. It occurs in almost all diseases and injuries. It is a protective mechanism whose function is for the organism to become aware of the danger and react in order to remove the painful irritation, however, if the painful irritation cannot be eliminated, then chronic pain occurs which no longer has a protective function, but additionally burdens the patient.

Pain in a neurological patient may simultaneously indicate current neurological problems but at the same time potentially life-threatening conditions, which are not neurological. Due to the increased frequency of comorbidities in the neurological patient, we must emphasize the importance of patient observation as well as the evaluation of pain by nursing technicians.

If we classify pain according to organs and organ systems, we must certainly take into account some other circumstances that do not originate from the organ or organ system itself and which can intensify or cause pain. Thus, the headache that is the most common subjective feeling in a neurological patient can be caused by some pathological substrate or some pathological process, e.g. in the early phase of hemorrhage, but also in less significant conditions. For example, we have a prominent headache in stroke in the recovery phase, where no other reason is confirmed, but the pain caused by contractures of the neck muscles due to long lying down.

Observing the patient, assessing the patient's condition, detecting pain, evaluating pain are a special entity in the health care of a neurological patient. Thanks to my experience of a few decades, I will introduce you to the examples of the most common causes of pain in neurological patients that were not primarily caused by acute or chronic neurological disease.

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Medicinska reč **Medical Word**

APSTRAKT 28S 2020; 1(2): 84–85 ABSTRACT 28E

Hipertenzija – javno zdravstveni problem u Rasinskom okrugu

Hypertension – public health problem in the Rasina district

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Apstrakt

Uvod: Kardiovaskularne bolesti najčešći su uzrok smrti kod muškaraca i žena u Europi te predstavljaju bitan javno-zdravstveni problem u celom svetu. U manje razvijenim zemljama smrtnost je u porastu i prestiže smrtnost od infektivnih bolesti. Značajno je da je u nekim razvijenim zemljama došlo do znatnog smanjenja kardiovaskularnog mortaliteta, što pokazuje da se odgovarajućim programima prevencije može uticati na kardiovaskularni morbiditet i mortalitet.

Arterijska hipertenzija se jedna od najčešćih bolesti današnjice. Smatra se da jedna trećina odrasle populacije ima pritisak koji bi se morao lečiti, a ovaj procenat se menja po regijama u zavisnosti od načina ishrane, fizičke aktivnosti i životne dobi. Visok krvni pritisak je najčešći faktor rizika za nastanak kardiovaskularnih bolesti. Rizik za infarkt srca, moždani udar i oboljenja bubrega raste kod osoba sa povišenim pritiskom - viši pritisak veći rizik, naročito kada su i drugi faktori rizika prisutni. Skrining za hipertenziju se sprovodi jedanput u dve godine ukoliko je krvni pritisak normalan, sistolni <120 mmHg i dijastolni <80 mmHg. Osobe koje pripadaju visokorizičnim grupama treba češće pregledati.

Cilj rada:
- Utvrditi učestalost hipertenzije kod pacijenata u Rasinskom okrugu,
- Utvrditi informisanost pacijenata o faktorima rizika za nastanak i razvoj hipertenzije u Rasinskom okrugu,
- Utvrditi informisanost pacijenata o merama prevencije hipertenzije u Rasinskom okrugu,
- Utvrditi koliki je javnozdravstveni problem hipertenzija u Rasinskom okrugu

Metodologija istraživanja: Vrsta studije po tipu studije preseka.
Vreme i mesto istraživanja: Istraživanje sprovedeno u Domu zdravlja u Kruševcu od 01.04.2018. do 13.11.2018. godine.
Uzorak: 300 pacijenata
Populacija: Pacijenti sa dijagnozom I 10 - Hipertenzija

Diskusija: Na osnovu dobijenih rezultata nakon urađene ankete, može se videti da veći deo ispitanika koristi lekove za regulisanje povišenog krvnog pritiska. Najveći broj ispitanika pripada grupi sa povišenom telesnom masom. Kada je u pitanju informisanost o faktorima rizika naši ispitanici su uglavnom informisani i veći broj ispitanika zna na koji način se mogu promeniti loše životne navike

Abstract

Introduction: Cardiovascular diseases are the most common cause of death in men and women in Europe and represent a significant public health problem worldwide. In less developed countries, mortality is on the rise and the level is getting higher than the level of mortality from infectious diseases. Significantly, there has been a significant reduction in cardiovascular mortality in some developed countries, indicating that appropriate prevention programs can affect cardiovascular morbidity and mortality.

Arterial hypertension is one of the most common diseases today. It is estimated that one-third of the adult population has a pressure that should be treated, and this percentage varies by region depending on diet, physical activity, and age. High blood pressure is the most common risk factor for cardiovascular disease. The risk of heart attack, stroke, and kidney disease increases in people with high blood pressure - higher blood pressure is a higher risk, especially when other risk factors are present. Screening for hypertension is performed once every two years if blood pressure is normal, systolic <120 mmHg, and diastolic <80 mmHg. People belonging to high-risk groups should be examined more often.

Aims:
- To determine the frequency of hypertension in patients in Rasina district,
- To determine the information of patients about risk factors for the occurrence and development of hypertension in Rasina district,
- To determine the information of patients about measures to prevent hypertension in the Rasina district,
- To determine the extent of the public health problem of hypertension in the Rasina district

Methodology: Type of study by type of cross-sectional study.
Time and place of the research: The research was conducted in the Health Center in Kruševac from the 1st of April to the 13th of 2018.
Sample: 300 patients
Population: Patients diagnosed with I 10 – Hypertension

Discussion: Based on the results obtained after the survey, it can be seen that the majority of respondents use medicines to regulate high blood pressure. The largest number of respondents belong to the group with increased body weight. When it comes to information about risk factors, our respondents are mostly informed and a larger number of respondents know how bad life habits can be changed.

Zaključci:
- Hipertenzija je bolest savremenog doba i u velikom procentu je zastupljena i kod mlade i kod starije populacije,
- Veći broj ispitanika ima prekomernu telesnu masu,
- Polovina ispitanika smatra da gojaznost utiče na pojavu hipertenzije,
- Veliki broj ispitanika puši cigarete,
- Veći broj ispitanika smatra da stres i fizička neaktivnost može uticati na pojavu hipertenzije,
- Ispitanici uglavnom smatraju da su dovoljno informisani o prevenciji pojave hipertenzije i da se pridržavaju dobijenih saveta,
- Ispitanici poseduju nedovoljno znanje o svojoj bolesti, što se naročito odnosi na faktore rizika i mogućnost nemedikamentnog snižavanja krvnog pritiska modifikacijom ovih promenljivih faktora, pravilnu ishranu, redovnost uzimanja antihipertenziva i ciljeve lečenja povišenog krvnog pritiska. Moramo raditi više na edukaciji stanovništva o zdravim stilovima života i potencirati zdravu ishranu kao osnov za zdrav i dugovečan život.

Conclusions:
- Hypertension is a disease of modern life and is present in a high percentage in both young and older populations,
- A larger number of respondents are overweight,
- Half of the respondents believe that obesity affects the occurrence of hypertension,
- A large number of respondents smoke cigarettes,
- A large number of respondents believe that stress and physical inactivity can affect the occurrence of hypertension,
- Respondents generally believe that they are sufficiently informed about the prevention of hypertension and follow the advice received,
- Subjects have insufficient knowledge about their disease, which especially refers to risk factors and the possibility of non-drug lowering of blood pressure by modifying these variable factors, proper diet, the regularity of taking antihypertensives, and goals of treatment of high blood pressure. We need to work more on educating the population about healthy lifestyles and emphasizing a healthy diet as a basis for a healthy and long life.

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Medicinska reč **Medical Word**

APSTRAKT 29S 2020; 1(2): 86–86 ABSTRACT 29E

Retke krvne grupe – karakteristike i klinički značaj

Rare blood groups – characteristics and clinical significance

Ana Antić

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Apstrakt

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

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

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

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

Abstract

It is very difficult to define a rare blood group, and each division can be controversial and heterogeneous. Due to racial, ethnic, and geographical diversity, a rare blood group is interpreted depending on the area and population that is the subject of the research. A rare blood group is one that meets one of the following three conditions: no expression of high-frequency antigens on erythrocytes, no expression of several antigens of the same blood group system on erythrocytes, or no expression of multiple antigens of „balanced" frequency (1 to 99%), in the general population, within several erythrocyte blood groups. There are national and international panels of rare blood donors around the world, one of which is sponsored by the the International Blood Group Reference Laboratory in Bristol, as well as the European Bank for Rare Blood, which is sponsored by the Council of Europe.

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

The availability of blood donors with rare phenotypes or genotypes may vary among countries, but blood with some phenotypes, such as Rhnull or Kell0, is difficult to provide in almost every state. The need for organized management of information on rare group donors was recognized long ago when in 1965 the The International Society of Blood Transfusion established the concept of The International Rare Donor Panel. The Working Party on Rare Donors of the The International Society of Blood Transfusion supports the continuous finding of donors of rare blood groups, collecting data on them within the International Panel of Rare Donors and providing their blood to patients around the world.

The blood transfusion services of each country should have data on the rarest blood groups in their climate. When the need for any of them arises, it is important to inform clinicians about the difficulties that may arise due to the length of waiting for the blood supply of the appropriate phenotype.

Internacionalni medicinski časopis iz oblasti biomedicinskih nauka International medical journal in the field of biomedical sciences
Medicinska reč **Medical Word**

APSTRAKT 30S 2020; 1(2): 87–87 ABSTRACT 30E

Specifičnosti zdravstvene nege pacijenta sa metastatskim tumorima sa nepoznatim primarnim ishodištem

Specifics of nursing care of patients with metastatic tumors with an unknown primary origin

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Apstrakt

Tumori nepoznatog primarnog ishodišta se definišu kao neoplazme kojima se primarno mesto ne može odrediti u trenutku dijagnoze pri punoj evaluaciji, a proces se nalazi u metastatskoj fazi. Oni čine 3–5% svih. Primarni tumor raste ili veoma sporo, ali pokazuje visok metastaski potencijal ili se dešava involucija primarnog ishodišta, a ostaju samo metastaze. Do danas nema konsenzusa, među naučnim krugovima, da li su tumori primarnog nepoznatog ishodišta samo metastatski tumori ili imaju specifičan genetski ekspresioni profil koji ih određujea kao tumore koji imaju potpuno drugačiji biološki i klinički tok bez obzira na primarno ishodište. Klinički podaci svedoče da ovi tumori najčešće imaju primarno ishodište iz pluća ili iz pankreasa, ali i sve druge lokalizacije dolaze u obzir. U histološkom pogledu u ove tumore spadaju: karcinom skvamoznih ćelija (planocelularni), adenokarcinomi raznog stepena diferentovanosti, melanomi i ređe histološke forme kao što su anaplastični karcinomi i niskodiferentovani tumori koji se histogenetski ne mogu odrediti. Među tumorima nepoznatog primarnog ishodišta u izvesnom procentu se mogu naći tumori germinativnog epitela tetstisa ili ovarijuma kao ekstragonadalni oblici ovih neoplazmi.

Prognoza ovih tumora je veoma loša sa kratkom medijanom preživljavanja uprkos intenzivnom tretmanu. Najbolje terapijske odgovore su dali platinski preparati u kombinaciji sa taksanima, gde se ukupni terapijski odogovor kretao od 12–26% uz medijanu preživljavanja od 5–7 meseci. Dodavanje trećeg agensa je bez koristi. Monoterapija gemcitabinom ili ciljanim agensima bevacizumab ili erlotinib pokazuju blago ohrabrujuće rezultate.

Nega ovih bolesnika je kompleksna i u stanjima uznapredovale ili terminalne bolesti simptomatska i palijativna u smislu maksimalne podržavajuće nege predstavlja okosnicu sestrinskog dela intervencija kod ovih bolesnika.

Abstract

Tumors of unknown primary origin are defined as neoplasms whose primary site cannot be determined at the moment of diagnosis discovery at full evaluation, and the process is in the metastatic phase. They make up 3-5% of all. The primary tumor grows either very slowly, but shows a high metastatic potential or an involution of the primary origin occurs, leaving only metastases. It has not been established among scientific circles whether tumors of primary unknown origin are only metastatic tumors or have a specific genetic expression profile that defines them as tumors that have a completely different biological and clinical course regardless of the primary origin. Clinical data show that these tumors usually have a primary origin from the lungs or pancreas, but all other localizations are also possible. Histologically, these tumors include: squamous cell carcinoma (squamous cell carcinoma), adenocarcinomas of various degrees of differentiation, melanomas and, less frequently, histological forms such as anaplastic carcinomas and low-differentiated tumors that cannot be determined histogenetically. Among the tumors of unknown primary origin, tumors of the germinative epithelium of the testis or ovary can be found in a certain percentage as extragonadal forms of these neoplasms.

The prognosis of these tumors is very poor with a short median survival despite intensive treatment. The best therapeutic responses were given by platinum preparations in combination with taxanes, where the total therapeutic response ranged from 12–26% with a median survival of 5–7 months. The addition of a third agent is useless. Gemcitabine monotherapy or targeted agents bevacizumab or erlotinib show slightly encouraging results.

The care of these patients is complex and in the conditions of advanced or terminal disease symptomatic and palliative in terms of maximum supportive care is the backbone of the nursing part of the intervention in these patients.

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APSTRAKT 31S 2020; 1(2): 88–88 ABSTRACT 31E

Tretman dekubitalnih rana
Treatment of decubital wounds

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Apstrakt

Dekubitus – hroniča rana izazvana pritiskom, predstavlja oštećenje kože i tkiva koje se nalazi ispod nje kao posledica predugog položaja tela u jednom položaju. Pritisak samog tela na podlogu, mada i bilo kakav drugi produženi pritisak može dovesti do pojave dekubitusa. U nastanku dekubitusa dominiraju tri glavna mehanizma: dejstvo sile pritiska, sile smicanja, trenja, i njihovom kombinacijom. Dekubitus nastaje zbog stalnog pritiska koji je dovoljan da naruši lokalnu cirkulaciju u mekim tkivima na duži period. Tkiva mogu kraći vremenski period podneti povišene pritiske,čak i značajno više,ali prolongirano vreme izlagalja povišenom pritisku, čak i ako je samo nešto iznad vrednosti kapilarnog punjenja,započinje kaskadu prema nekrozi tkiva i poajvu ulkusa. Etiološki faktori koji dovode do pojave dekubitusa mogu se podeliti na: egzogene(spoljašnje) i endogene (unutrašnje).

U kiličkoj slici dekubitusa dominira lokalizacija promena na regijama tela koje su izložene pritisku o tvrdu, mokru i/ili neravnu podlogu. U razvoju kliničke slike dekubitusa razlikujemo pet stadijuma. Lečenje dekubitusa je veoma dug proces koji zahteva multidisciplinaran pristup i angažovanje lekara različitih specijalnosti: dermatologa, hirurga, interniste (kardiologa, endokrinologa), urologa, neurologa, fizijatra, srednjeg medicinskog kadra i pomoćnog medicinskog osoblja. U lečenju dekubitalnih ulceracija primenjuju se dva osnovna principa: sistemski ili opšti oblik lečenja i lokalni oblik lečenja (konzervativni ili hiruški). Najčešće komplikacije su: infekcija, dehidratacija i metabolički disbalans, anemija, malignizacija, estetske deformacije.

Zaključak: Savremena nauka kaže da je pojava dekubita neuspeh celog sistema zdravstvene zaštite.Svi dekubitalni ulkusi se mogu prevenirati,što je bazični tretman,a u skoro svim situacijama pojava masivnih ulkusa označava grešku procedure standradne nege obolele osobe. Postojanje dekubitusa je istovremeno veliki zdravstveni i ekonomski program:bolesnika, ustanove u koje se nalazi, njegove okoline i šire društvene zajednice. Intenziviranje nege, edukacija osoblja, redukcija rizičnih faktora, implementacija pravilnih preventivnih postupaka, ispravna terapija mogla bi u značajnoj meri sprečiti nastanak dekubitusa.

Abstract

Decubitus - a chronic wound caused by pressure, is damage to the skin and tissues that are below it as a result of the too-long position of the body in one position. The pressure of the body itself on the substrate, although any other prolonged pressure can lead to pressure ulcers. The development of pressure ulcers is dominated by three main mechanisms: the action of pressure force, shear force, friction, and their combination. Decubitus occurs due to constant pressure, which is enough to disrupt the local circulation in the soft tissues for a longer period. Tissues can withstand elevated pressures for a shorter period of time, even significantly more, but prolonged exposure time to elevated pressure, even if it is only slightly above the value of capillary filling, begins a cascade towards tissue necrosis and ulcers. Etiological factors that lead to pressure ulcers can be divided into exogenous (external) and endogenous (internal).

The clinical picture of pressure ulcers is dominated by the localization of changes in regions of the body that are exposed to pressure on a hard, wet and / or uneven surface. We distinguish five stages in the development of the clinical picture of pressure ulcers. Treatment of pressure ulcers is a very long process that requires a multidisciplinary approach and the engagement of doctors of various specialties: dermatologists, surgeons, internists (cardiologists, endocrinologists), urologists, neurologists, physiatrists, midwives and paramedics. In the treatment of decubitus ulcers, two basic principles are applied: systemic or general form of treatment and local form of treatment (conservative or surgical). The most common complications are: infection, dehydration and metabolic imbalance, anemia, malignancy, aesthetic deformities.

Conclusion: Modern science says that the appearance of decubitus is a failure of the entire health care system. All decubitus ulcers can be prevented, which is a basic treatment, and in almost all situations the appearance of massive ulcers means a mistake in the standard care procedure. The existence of pressure ulcers is at the same time a great health and economic program: the patient, the institution in which he is located, his surroundings, and the wider community. Intensification of care, education of staff, reduction of risk factors, implementation of proper preventive procedures, correct therapy could significantly prevent the occurrence of pressure ulcers.

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APSTRAKT 32S 2020; 1(2): 89–89 ABSTRACT 32E

Terapijski potencijal N-acetilcisteina
Therapeutic potential of N-acetylcysteine

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Apstrakt

N-acetilcistein je prekursor L-cisteina i redukovanog glutationa čiji se efekat i primena zasniva na njegovim antioksidacionim i antiinflamatornim svojstvima. Dobre farmakokinetske karakteristike, bezbednost primene u većim dozama i u svim uzrastima (izuzev dece mlađe od 2 godine) ga čine široko primenjivanim u kliničkoj praksi. Indikacije za koje je N-acetilcistein registrovan za primenu u Republici Srbiji i za koje se može dobiti bez lekarskog recepta su akutni bronhitis, akutne epizode hronične opstruktivne bolesti pluća, cistična fibroza, emfizem pluća i bronhiektazije. U svim pomenutim indikacijama se primena N-acetilcisteina zasniva na njegovoj mogućnosti da izvrši hidrolizu disulfidnih veza u okviru polimera mucina svojim slobodnim tiolnim grupama i time smanjenjem njegovog viskoziteta olakša iskašljavanje. U svetu se pored navedenih indikacija N-acetilcistein primenjuje, odnosno ispituje za potencijalnu primenu u domenu poboljšanja stanja kod mnogih neuroloških oboljenja, poput Parkinsonove i Alchajmerove bolesti, Daunovog sindroma, multiple skleroze, amiotrofične lateralne skleroze, subarahnoidalne hemoragije, traumatske povrede mozga i drugih neurodegenerativnih bolesti mozga. N-acetilcistein se može primeniti oralno, intravenski i inhalaciono, a način aplikacije zavisi od uzrasta, indikacije i potrebe za brzim efektom, što je posebno značajno ukoliko se N-acetilcistein primenjuje kao antidot kod trovanja acetaminofenom. Kao antidot se u visokim koncentracijama koristi i u slučaju trovanja gljivama koje sadrže amanitin i halogenim ugljovodonicima. Takođe, veliki potencijal i povod za dodatna istraživanja predstavlja i pozitivan efekat primene N-acetilcisteina kod rešavanja problema sa zavisnošću od pojedinih supstanci, usled njegovog uticaja na razmenu cistein/glutamat u nucleus accumbens-u. Sve pomenute indikacije se smatraju potencijalnim, a kako bi se preciznije definisala preporučena doza, bezbednosni aspekt i dužina primene N-acetilcisteina u tom domenu, potrebno je koncipirati više dobro osmišljenih, kvalitetnih, multicentričnih, kontrolisanih kliničkih ispitivanja. Posebnu pažnju u navedenim istraživanjima treba obratiti na postojanje polifarmacije, naročito kod starije populacije, prepoznavanju potencijalnih interakcija i blagovremenom uočavanju neželjenih reakcija.

Abstract

N-acetylcysteine is a precursor of L-cysteine and reduced glutathione, the effect, and application of which are based on its antioxidant and anti-inflammatory properties. Good pharmacokinetic characteristics, the safety of use in higher doses, and at all ages (except for children younger than 2 years) make it widely used in clinical practice. Indications for which N-acetylcysteine is registered for use in the Republic of Serbia and for which it can be obtained without a doctor's prescription are acute bronchitis, acute episodes of chronic obstructive pulmonary disease, cystic fibrosis, emphysema of the lungs, and bronchiectasis. In all the above indications, the use of N-acetylcysteine is based on its ability to hydrolyze disulfide bonds within the mucin polymer with its free thiol groups and thereby facilitate its expectoration by reducing its viscosity. In addition to the above indications, N-acetylcysteine is used worldwide for potential use in the field of improving the condition of many neurological diseases, such as Parkinson's and Alzheimer's disease, Down syndrome, multiple sclerosis, amyotrophic lateral sclerosis, subarachnoid hemorrhage, traumatic neurogenic brain injury, and brain diseases. N-acetylcysteine can be administered orally, intravenously, and by inhalation, and the method of application depends on age, indication, and the need for a rapid effect, which is especially important if N-acetylcysteine is used as an antidote for acetaminophen poisoning. It is also used as an antidote in high concentrations in the case of poisoning by fungi containing amanitin and halogenated hydrocarbons. Also, great potential and reason for additional research is the positive effect of the use of N-acetylcysteine in solving the problem of dependence on certain substances, due to its effect on the exchange of cysteine /glutamate in the nucleus accumbens. All the mentioned indications are considered potential, and in order to more precisely define the recommended dose, safety aspect, and length of application of N-acetylcysteine in that domain, it is necessary to design more well-designed, quality, multicenter, controlled clinical trials. Special attention in these studies should be paid to the existence of polypharmacy, especially in the elderly population, the recognition of potential interactions, and the timely detection of adverse reactions.

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Medicinska reč **Medical Word**

APSTRAKT 33S 2020; 1(2): 90–90 ABSTRACT 33E

Prevencija hroničnih komplikacija diabetes mellitus-a
Prevention of chronic complications of diabetes mellitus

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Apstrakt

Dijabetes je hronično oboljenje sa ozbiljnim pratećim komplikacijama, koje obolelima i njihovim porodicama nameće doživotne zahteve u cilju kontrole bolesti. Osobe obolele od dijabetesa treba redovno da mere nivo šećera u krvi, uzimaju propisanu terapiju, da budu fizički aktivne i prilagode svoje navike u ishrani. Bez dobre edukacije, oboleli od dijabetesa su manje spremni da prihvate predložene preporuke u cilju efektivne kontrole bolesti, da promene stil života i suoče se sa psihosocijalnim problemima vezanim za dijabetes. Loša kontrola bolesti imaće za posledicu povećan rizik za nastanak komplikacija dijabetesa.

Najčešće hronične komplikacije dijabeta su:
- Dijabetesna oboljenja oka – Dijabetes je najčešći uzrok slepila kod radno sposobne populacije, a slepilo je 25 puta češće kod dijabetičara nego kod opšte populacije. Međutim, brižljivom negom, redovnim oftalmološkim kontrolaama, dobrom regulacijom glikemije i krvnog pritiska, može se sprečiti pojava i progresija dijabetesne bolesti oka.
- Dijabetesna oboljenja bubrega i urinarnog trakta – U ovu grupu oboljenja spadaju dijabetesna nefropatija, akutni cistitis, akutni i hronični pijelonefritis i atonija mokraćne bešike. Prevencija je usmerena na postizanje optimalne glikoregulacije i ciljanih vrednosti krvnog pritiska, čime se može usporiti progresija ili čak zaustaviti razvoj bolesti.
- Kardiovaskularna oboljenja u dijabetesu – Procenjuje se da je morbiditet i mortalitet od ove grupa oboljenja 2–5 puta veći nego u nedijabetičara sličnih godina starosti. Kao preventivna mera se preporučuje intenzivna kontrola svih faktora rizika za razvoj KVB, dislipidemije, hipertenzije, pušenja...
- Periferna vaskularna bolest – Dijabetes je najvažniji netraumatski uzrok amputacija – preko 50% svih netraumatskih amputacija izvršeno je u dijabetičara. Promena se dešavaju na arterijskim krvnim sudovima, ali i u mikrocirkulaciji.
- Dijabetesne neuropatije – Kod dijabetičara se istovremeno sa vaskularnim dešavaju i promene na perifernim nervima,ali i na nervima koji regulišu vazodilataciju i vazokonstrikciju.

Zaključak: Prevencija podrazumeva kontrolu glikemije i krvnog pritiska, dislipidemije, pušenja, ciljani pregled stopala, edukaciju o samopregledu i nezi stopala.

Abstract

Diabetes is a chronic disease with serious accompanying complications, which imposes lifelong demands on patients and their families in order to control the disease. People with diabetes should regularly measure their blood sugar level, take the prescribed therapy, be physically active, and adjust their eating habits. Without a good education, diabetics are less willing to accept the proposed recommendations in order to effectively control the disease, change their lifestyle, and face psychosocial problems related to diabetes. Poor disease control will result in an increased risk of developing complications of diabetes.

The most common chronic complications of diabetes are:
- Diabetic eye diseases – Diabetes is the most common cause of blindness in the working-age population, and blindness is 25 times more common in diabetics than in the general population. However, with careful care, regular ophthalmological check-ups, good regulation of glycemia and blood pressure, the occurrence and progression of diabetic eye disease can be prevented.
- Diabetic diseases of the kidneys and urinary tract – This group of diseases includes diabetic nephropathy, acute cystitis, acute and chronic pyelonephritis, and atony of the bladder. Prevention is aimed at achieving optimal glycoregulation and targeted blood pressure values, which can slow the progression or even stop the development of the disease.
- Cardiovascular diseases in diabetes – It is estimated that the morbidity and mortality of this group of diseases is 2–5 times higher than in non-diabetics of similar age. As a preventive measure, intensive control of all risk factors for the development of CVD, dyslipidemia, hypertension, smoking …
- Peripheral vascular disease – Diabetes is the most important non-traumatic cause of amputations – over 50% of all non-traumatic amputations are performed in diabetics. The changes occur in the arterial blood vessels, but also in the microcirculation.
- Diabetic neuropathies – In diabetics, changes occur on the peripheral nerves at the same time as the vascular ones, but also on the nerves that regulate vasodilation and vasoconstriction.

Conclusion: Prevention includes control of glycemia and blood pressure, dyslipidemia, smoking, targeted foot examination, education on self-examination, and foot care.

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APSTRAKT 34S 2020; 1(2): 91–91 ABSTRACT 34E

Perkutane intervencije na hepatobilijarnom traktu
Percutaneous interventions on the hepatobilliary tract

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Apstrakt

Jetra je organ koji neretko biva zahvaćen patološkim procesima, bilo da su oni primarno nastali u njoj ili je ona sekundarno invadirana. Zbog svoje specifičnosti u vaskularizaciji, strukturi parenhima i sposobnosti da se regeneriše jetra je organ na kome se izvodi možda i najveći broj interventno radioloških procedura. Ili se to nama, koji se ovim poslom svakodnevno bavimo, samo tako čini. Sve intervencije koje se na jetri izvode mogu se razvrstati na one koje se izvode na parenhimu, vaskularnim strukturama i bilijarnom traktu. U Odseku Interventne radiologije Centra za radiologiju i MR KCS-a godišnje se izvede oko 1000 interventnih procedura na ovom sistemu. Najveći broj na bilijarnom stablu (perkutane bilijarne drenaže, balon kateterske dilatacije, postavljanje kateterskih i metalnih proteza). Na drugom mestu po učestalosti su interventne procedure na parenhimu (perkutane biopsije, sklerozacije i termalne ablacije), a na trećem vaskularne intervencije (TACE, TIPS, PVE).

U ovom radu biće razmatrani različiti aspekti primene svih ovih procedura. Ekspanzija novih metoda, pojava novih materijala kao i modifikacija postojećih tehnika učinili su da je uspešnost u izvođenju ovih procedura postala značajno veća, a procenat komplikacija značajno manji.

Abstract

The liver is an organ that is often affected by pathological processes, whether they are primarily in it or it is secondarily invaded. Due to its specificity in vascularization, the structure of the parenchyma, and the ability to regenerate the liver, it is the organ on which perhaps the largest number of interventional radiological procedures are performed. Or it just seems that way to us, who deal with this business every day. All interventions performed on the liver can be classified into those performed on the parenchyma, vascular structures, and biliary tract. In the Department of Interventional Radiology of the Center for Radiology and MR KCS, about 1000 intervention procedures are performed annually on this system. The largest number on the biliary tree (percutaneous biliary drainage, balloon catheter dilation, placement of the catheter, and metal prostheses). In second place in terms of frequency are interventional procedures on the parenchyma (percutaneous biopsies, sclerosis, and thermal ablation), and in third place are vascular interventions (TACE, TIPS, PVE).

In this paper, various aspects of the application of all these procedures will be considered. The expansion of new methods, the appearance of new materials as well as the modification of existing techniques have made success in performing these procedures significantly higher, and the percentage of complications significantly lower.

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APSTRAKT 35S 2020; 1(2): 92–92 ABSTRACT 35E

Primarna artroplastika kuka
Primary hip arthroplasty

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Apstrakt

Broj primarnih artroplastičnih procedura na kukovima je sve veći sa tendencijom stalnog porasta. Savremeni materijali i dizajni endoproteza koji se unapređuju iz godine u godinu dozvoljavaju bezbolan i pun obim pokreta u kuku uz dugi vek proteze. Preko 270 000 artroplastika kuka se uradi u SAD godišnje a očekivana projekcija za 2030. je dvostruka.

Osnovne indikacije za primarnom artroplastikom kuka su degenerativna osteoartroza kuka, prelomi vrata butne kosti, oštećenje kuka usled razvojnog poremećaja kuka i oštećenje kuka u sklopu reumatoidnog artritisa.

Osteoartroza kuka je najučestaliji razlog za artroplastikom kuka. Incidenca osteoartroze kuka (koksartroze) iznosi 3–5% kod ljudi starijih od 55 godina. U odmaklom stadijumu osteoartroze kuka finalno rešenje je artroplastika kuka tj. implantacija totalne endoproteze kuka.

Bolesnici sa prelomom vrata butne kosti kuka zauzimaju veliki deo posteljnog fonda ortopedskih i rehabilitacionih ustanova. Visok procenat smrtnosti nakon ovih preloma objašnjava se prisutnim pratećim komorbiditetom (bolesti kardio-vaskularnog, pulmonalnog i endokrinog sistema). Operativno lečenje preloma vrata butne kosti ugradnjom endoproteze kuka predstavlja metodu izbora uvek kad je to moguće i treba se izvesti što pre od povrede nakon adekvatne preoperativne pripreme.

Različiti tipovi endoproteza kuka za osteoartozu kao i prelome vrata butne kosti (totalne, subtotalne i parcijalne) omogućavaju vrlo ranu vertikalizaciju pacijenata uz dozvoljeni oslonac na operisanu nogu. Ovo izuzetno pogoduje pacijenatima jer se vrlo rana može zaopočeti sa rehabiltacijom.

Savremene hirurške tehnike, kvalitetne endoproteze kuka, adekvatna zdravstvena nega i rana rehabilitacija imaju za cilj da smanje postoperativni morbiditet i mortalite i da pacijente osposobe za normalan i kvalitetan život.

Abstract

The number of primary arthroplasty procedures on the hips is increasing with a tendency of constant increase. Modern materials and designs of endoprostheses that are improving from year to year allow painless and a full range of motion in the hip with a long life of the prosthesis. Over 270,000 hip arthroplasties are performed in the United States annually, and the expected projection for 2030 is double.

The main indications for primary hip arthroplasty are degenerative osteoarthritis of the hip, fractures of the femoral neck, hip damage due to the developmental disorder of the hip, and hip damage as part of rheumatoid arthritis.

Hip osteoarthritis is the most common cause of hip arthroplasty. The incidence of hip osteoarthritis (coxarthrosis) is 3-5% in people older than 55 years. In the advanced stage of osteoarthritis of the hip, the final solution is hip arthroplasty - ie., implantation of a total hip endoprosthesis.

Patients with fractures of the femoral neck of the hip occupy a large part of the bed stock of orthopedic and rehabilitation institutions. The high mortality rate after these fractures is explained by the accompanying comorbidity (diseases of the cardiovascular, pulmonary, and endocrine systems). Surgical treatment of femoral neck fractures by implantation of a hip endoprosthesis is the method of choice whenever possible and should be reported as soon as possible after the injury after adequate preoperative preparation.

Different types of hip endoprostheses for osteoarthritis as well as fractures of the femoral neck (total, subtotal and partial) enable very early verticalization of patients with permitted support on the operated leg. This is extremely beneficial for patients because rehabilitation can begin very early.

Modern surgical techniques, quality hip endoprostheses, adequate health care, and early rehabilitation aim to reduce postoperative morbidity and mortality and to prepare patients for a normal and quality life.

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U nekoliko koraka do prave dijagnoze kod bola u ramenu
Several steps to the right diagnosis in shoulder pain

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Apstrakt

Više od 45 procenata bolesnika u ordinaciju lekara opšte prakse dolazi zbog bola u lokomotornom sistemu. Bol je neprijatno senzitivno i emocionalno iskustvo udruženo sa postojećim ili pretećim oštećenjem tkiva. Bol u ramenu relativno česta pojava a jedan od uzroka je i to što je rame najpokretljiviji zglob.

Brojna su patološka stanja koja uzrokuju bol: Biceps Tendinitis, Rotator Cuff oštećenje, Impingement sindrom, Burzitis, Artritis AC zgloba, Multidirekcionalna nestabilnost, Adhezivni kapsulitis.

Dobra anamneza u dijagnostici bola u ramenu se sastoji od 4 pitanja:
– Gde je najintenzivniji bol?
– Šta je najveći problem za pacijenta?
– Da li bol budi pacijenta u toku noći?
– Da li se bol javlja ispod lakta?

Rutinsko kliničko ispitivanje se sastoji od: inspekcije, palpacije, ispitivanja pokretljivosti i specjalnih testova. U dijagnostici bola u ramenu veoma su važna i radiografska ispitivanja koja se sastoje od: klasične radiografije, ultrazvuka, MRI, CT, artrografije i scintigrafije.

Lokalna primena NSAIL može obezbediti adekvatnu analgeziju u stanjima poput istegnuća, iščašenja i povrede nastalih usled prenaprezanja. Ne postoji veća incidencija lokalnih kožnih reakcija u poređenju sa placebom, i ne uzrokuju sistemska neželjena dejstva kao oralni NSAIL. Lokalni NSAIL su naročito korisni kod pojedinaca koji ne tolerišu oralne NSAIL, ili kod kojih su isti kontraindikovani.

Abstract

More than 45 percent of patients come to the general practitioner's office because of pain in the locomotor system. Pain is an unpleasantly sensitive and emotional experience associated with existing or threatening tissue damage. Shoulder pain is a relatively common occurrence and one of the causes is that the shoulder is the most mobile joint.

There are numerous pathological conditions that cause pain: Biceps Tendinitis, Rotator Cuff damage, Impingement syndrome, Bursitis, Arthritis of the AC joint, Multidirectional instability, Adhesive capsulitis.

Good history in the diagnosis of shoulder pain consists of 4 questions:
– Where is the most intense pain?
– What is the biggest problem for the patient?
– Does the pain wake up the patient during the night?
– Does the pain occur under the elbow?

The routine clinical examination consists of inspection, palpation, mobility testing, and special tests. In the diagnosis of shoulder pain, radiographic examinations are also very important, consisting of classical radiography, ultrasound, MRI, CT, arthrography, and scintigraphy.

The topical application of NSAIDs can provide adequate analgesia in conditions such as sprains, strains, and injuries caused by overexertion. There is no higher incidence of local skin reactions compared to placebo, and they do not cause systemic side effects like oral NSAIDs. Topical NSAIDs are particularly useful in individuals who do not tolerate oral NSAIDs, or in whom they are contraindicated.

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Hirurški pristupi u intervencijama na laktu
Surgical approaches in stiff elbow surgeries

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Apstrakt

Uvod: Kada su u pitanju operacije ukočenosti lakta opisano je nekoliko pristupa : posterolateralni, lateralni, anteromedijalni, medijalni i posteromedijalni. Bazirano na patologiji, ukočenost može biti: vanzglobna (ekstrinzična) sa kontrakturom kapsule, ligamenta i mišića nakon traume koja stvara koštani most, intratikularni (intrinzični) sa intraartikularnom adhezijom ili prelomom koji uzrokuje mehaničko ograničenje pokreta. Intra i vanzglobni (mešoviti), unutrašnji sa ožiljcima mekog tkiva i ekstrinzični sa zglobnom adhezijom.

Cilj: Analizirati korišćene hiruške pristupe u procesu operacije ukočenosti lakta u našoj praksi

Materijal i metode:

1 Hiruško lečenje ukočenog lakta sa ekstrintičnom patologijom u slučaju zdravog zgloba predstavlja: 1. eksciziju prednje kapsule i postupak bočnog ili medijalnog stuba. Indikacije su visokokvalitetna kontraktura i opsežni osteofiti oko lakatnog zgloba. Koncept otvorenog bočnog pristupa je identifikacija suprakondilarnog grebena i pristup prednjem i zadnje odeljku koji podižu ekstenzor carpi radialis longus and brachioradialis na bočnoj strani i triceps na zadnjoj strani. U poodmakloj fazi osteorartritisa, srednji bočni osteofiti postaju veći. Rezultat može biti gubitak pokreta, posebno gubitak fleksije. Kod artroplastike debridmentacije, veoma je važno ukloniti sve osteofite uz pomoć procedure medijalne kolone. 2. Artroskopska ulnohumeralna i osteokapsularna artroplastika sa četiri glavna koraka: uklanjanje svih labavih tela, uklanjanje svih osteofita u ulnohumeralnoj artikulaciji, totalna sinovektomija i prednja i zadnja kapsulektomija; 3. Otvorena ulnohumeralna artroplastika (OK postupak); 4. Otvorena artroplastika
2. Hirurško lečenje ukočenog lakta s unutrašnjom patologijom je: interpozicijska artroplastika i totalna zamena lakta.

Hirurške indikacije za hirurško lečenje ukočenog lakta su ukočenost, gubitak ekstenzije veći od 30 stepeni i / ili manji od 110 stepeni fleksije i bol koji nije reagovao na konzervativni tretman.

Rezultati: Ispitane su sekvencijalne promene u produženju i savijanju luka kod 19 pacijenata praćenih više od 5 godina. Preoperativno produženje od 32 stepena poboljšalo se za 19 stepeni u jednoj godini, a najnovije pogoršalo za 26 stepeni. Suprotno tome, postoperativna fleksija od 119 stepeni ostala je konzistentna.

Zaključak: Ne postoji jedinstveni odgovor za ukočeni lakat. Postupak bočnog stuba treba koristiti u slučaju blage ukočenosti uglavnom uz pomoć patologije mekih tkiva. Postupak medijalnog stuba treba koristiti u slučaju velike ukočenosti i kod patologije kostiju i mekih tkiva. Artroskopija je relativna kontraindikacija za visokokvalitetne ukočene laktove.

Abstract

Introduction: In stiff elbow surgeries a few approaches are described: posterolateral, lateral, anterolateral, anteromedial, medial, posteromedial. Based on pathology stiffness could be: Extra-articular (Extrinsic) with contracture of capsule, ligament and muscle after trauma which produce bony bridge; Intra-articular (Intrinsic) with intra-articular adhesion or fracture causing mechanically limitation of motion; Intra & extra-articular (Mixed), Intrinsic with scarring of soft tissue and Extrinsic with articular adhesion.

Aim: To analyze used surgical approaches for treating different causes of stiff elbow in our practice

Material and Methods:

1. Surgical management of stiff elbow with extrinsic pathology in case of normal joint are: 1. Anterior capsular excision and lateral and/or medial column procedure. Indications are high grade contracture and extensive osteophytes around elbow joint. The concept of open lateral approach is to identify the supracondylar ridge and access to anterior and posterior compartment elevating extensor carpi radialis longus and brachioradialis on lateral side and triceps on posterior side. In advanced stage of Osteoarthritis, medial side osteophytes become bigger. This may result in loss of motion, especially in loss of flexion. In debridement arthroplasty, it is very important to remove these osteophyte completely with medial column procedure; 2. Arthroscopic ulnohumeral and osteocapsular arthroplasty with four major steps: removal of all loose bodies, removal of all osteophytes in the ulnohumeral articulation, total synovectomy and anterior and posterior capsulectomy; 3. Open ulnohumeral arthroplasty (OK procedure); 4. Open debridement arthroplasty
2. Surgical managements of stiff elbow with intrinsic pathology are: interposition arthroplasty and total elbow replacement.

Operative indications for surgical management of stiff elbow are stiffness, loss of extension more than 30 degrees and/or less than 110 degrees of flexion and pain that was not responsive to conservative treatment.

Results: Sequential changes of extension-flexion arc were examined in 19 patients followed greater than 5 years. Preoperative extension of 32 degrees was improved 19 degrees at one year, and was aggravated 26 degrees at the latest examination. In contrast, postoperative flexion of 119 degrees remained consistent.

Conclusion: There is no single answer for stiff elbow. Lateral column procedure should be used in case of mild stiffness with soft tissue pathology mainly. Medial column procedure should be used in case of severe stiffness and with bone and soft tissue pathology. Arthroscopy is relative contraindication for high grade stiff elbow.