

ZDRAVSTVENA NEGA PACIJENATA SA ZAPALJENSKIM BOLESTIMA CREVA

Katarina Pavić¹, Slobodanka Bogdanović Vasić¹, Marija Vešić¹, Roland Antić¹, Dušica Perović², Nikola Savić^{3,4}

¹ Odsek za medicinske i poslovno-tehnološke studije, Akademija strukovnih studija Šabac, Šabac, Republika Srbija

² Wellness Studio Lasser, Vrbas, Republika Srbija

³ Medicinska škola „Dr Miša Pantić“, Valjevo, Republika Srbija

⁴ Fakultet zdravstvenih i poslovnih studija, Univerzitet Singidunum, Valjevo, Republika Srbija

* Korespondencija: Katarina Pavić, Akademija strukovnih studija Šabac, Odsek za medicinske i poslovno-tehnološke studije, Hajduk Veljkova 10, Šabac, Republika Srbija; e-mail: katarinapavic994@gmail.com

SAŽETAK

Zapaljenske bolesti creva su hronične bolesti nepoznate etiologije sa tendencijom javljanja u mlađoj populaciji. Postoje dva tipa oboljenja – Kronova bolest i ulcerozni kolitis. Zbog svoje kompleksnosti, ove bolesti predstavljaju veliki problem današnje medicine, kako sa dijagnostičkog, tako i sa terapijskog aspekta. Inflamatorne bolesti creva negativno utiču na kvalitet života, obrazovanje, zapošljavanje i svakodnevno funkcionisanje obolelih. U ovom stručnom radu prikazani su najčešći problemi sa kojima se medicinske sestre/tehničari susreću u bolničkim uslovima tokom rada sa obolelima, kroz metod procesa zdravstvene nege (PZN), sa navedenim sestrinskim intervencijama za konkretan problem.

Ključne reči: zapaljenske bolesti creva, Kronova bolest, ulcerozni kolitis, proces zdravstvene nege

Uvod

Zapaljenske bolesti creva (engl. *Inflammatory bowel disease* – IBD) su hronične bolesti nepoznate etiologije sa tendencijom javljanja u mlađoj populaciji. Postoje dva tipa oboljenja – Kronova bolest (KB, lat. *Morbus Crohn*) i ulcerozni kolitis (UC, lat. *Colitis ulcerosa*). Osnovna razlika je u lokalizaciji, jer se Kronova bolest može javiti u bilo kom delu digestivnog trakta - „od usta do anusa“, dok ulcerozni kolitis zahvata samo sluznicu debelog creva (1).

Etiologija zapaljenskih bolesti creva i dalje nije u potpunosti razjašnjena, iako je godinama predmet brojnih istraživanja. Pretpostavka je da postoji pojačan imuni odgovor na određene antigene u organizmu obolele osobe. Nasledni faktor u kombinaciji sa faktorima sredine, kao što su pušenje i nepravilna ishrana bogata rafinisanim šećerima, doprinose nastanku bolesti. Takođe, sa ovim oboljenjima dovodi se u vezu smanjena fizička aktivnost, pretrpljeni ozbiljan psihički stres, kao i postojanje hroničnih komorbiditeta (2). Zbog svoje kompleksnosti, ove bolesti predstavljaju veliki

problem današnje medicine, kako sa dijagnostičkog, tako i sa terapijskog aspekta. Karakterišu ih smene faze pogoršanja i remisije.

Epidemiološki podaci pokazuju da je incidencija Kronove bolesti 3 do 20 slučajeva godišnje na 100.000 stanovnika u Sjedinjenim Državama (3), a ulceroznog kolitisa 2 do 21 slučaj na 100.000 stanovnika (4). Prema studiji *Molodecky* i saradnika, na osnovu podataka prevalencije, u Evropi 322 osobe na 100.000 stanovnika imaju Kronovu bolest, a 505 na 100.000 stanovnika ulcerozni kolitis (5). Tačni podaci za R. Srbiju ne postoje, iako su pretpostavke da je taj broj oko 10.000 (6). Prevalencija bolesti raste sa godinama starosti, a najveća je u uzrastu 45 i više godina i među belim stanovništvom nehispankog porekla (2).

Ukoliko se na vreme ne prepoznaju i ne tretiraju, ove bolesti mogu doprineti ireverzibilnom oštećenju digestivnog trakta ili trajnom invaliditetu. Od zapaljenskih bolesti creva češće obolevaju mlađe osobe, između 15 i 35 godina, a značajan je porast broja obolelih u pedijatrijskoj populaciji (2).

HEALTH CARE OF PATIENTS WITH INFLAMMATORY BOWEL DISEASES

Katarina Pavić¹, Slobodanka Bogdanović Vasić¹, Marija Vešić¹, Roland Antonić¹, Dušica Perović², Nikola Savić^{3,4}

¹ Department for Medical, Business and Technological Studies, Academy of Vocational Studies Šabac, Šabac, Republic of Serbia

² Wellness Studio Lasser, Vrbas, Republic of Serbia

³ Medical High School „Dr Miša Pantić“, Valjevo, Republic of Serbia

⁴ Faculty of Health, Legal and Business Studies, Singidunum University, Valjevo, Republic of Serbia

* Correspondence: Katarina Pavić, Academy of Vocational Studies Šabac, Department for Medical, Business and Technological Studies, Hajduk Veljkova 10, Šabac, Republic of Serbia; e-mail: katarinapavic994@gmail.com

SUMMARY

Inflammatory bowel diseases are chronic diseases of unknown etiology with a tendency to occur in the younger population. There are two types of disease - Crohn's disease and ulcerative colitis. Due to their complexity, these diseases represent a major problem of today's medicine, both from diagnostic and therapeutic aspects. Inflammatory bowel diseases negatively affect the quality of life, education, employment and daily functioning of patients. This paper presents the most common problems that nurses/technicians in hospital conditions encounter when working with patients, through the method of the health care process, with the listed nursing interventions for the specific problem.

Key words: inflammatory bowel diseases, Crohn's disease, ulcerative colitis, nursing process

Introduction

Inflammatory bowel diseases are chronic diseases of unknown etiology with a tendency to occur in the younger population. There are two types of disease – Crohn's disease (lat. Morbus Crohn) and ulcerative colitis (lat. Colitis ulcerosa). The main difference relates to the localization, because Crohn's disease can appear in any part of the digestive tract – “from the mouth to the anus”, while ulcerative colitis occurs only in the mucosa of the colon (1).

The etiology of inflammatory bowel diseases has not been clarified completely, although it has been the subject of numerous studies for years. It has been assumed that increased immune response to certain antigens appears in the body of the ill person. The hereditary factor in combination with environmental factors such as smoking and improper diet rich in refined sugar contribute to the occurrence of disease. Also, insufficient physical activity and serious psychological stress are associated with these diseases, as well as the

existence of chronic comorbidities (2). Due to their complexity, these diseases represent a major problem in contemporary medicine, considering both diagnostic and therapeutic aspects. They are characterized by the altering phases of exacerbation and remission.

Epidemiological data show that the incidence of Crohn's disease is 3 to 20 cases per 100,000 inhabitants per year in the United States of America (3), while the incidence of ulcerative colitis is 2 to 21 cases per 100,000 inhabitants (4). According to the study by Molodecky and associates, based on the data on prevalence, in Europe 322 persons per 100,000 inhabitants have Crohn's disease, while 505 persons per 100,000 have ulcerative colitis (5). There are no precise data for the Republic of Serbia, although this number is assumed to be around 10,000 (6). The prevalence of the disease increases with age, while the highest prevalence is among persons aged 45 years and older and in the white population of non-Hispanic origin (2).

Oboleli od zapaljenskih bolesti creva imaju narušen kvalitet života i svakodnevno funkcionisanje, a potrebna su im i česta bolovanja usled simptoma i znakova bolesti i hirurške intervencije. Prisustvo simptoma bolesti može otežati obrazovanje i zapošljavanje obolelih, jer neretko imaju i do 10 stolica dnevno (7). Često je prisutna socijalna izolacija obolelih, razvoj anksioznosti i depresije (8). Ipak, uz rano prepoznavanje i primenu adekvatne terapije, ove bolesti se mogu držati u remisiji godinama (7).

Neophodno je podizanje svesti javnosti o zapaljenskim bolestima creva kroz edukacije, pogotovo mladih osoba. Edukacija je neophodna u smislu prepoznavanja simptoma i značaja pravovremenog javljanja lekaru specijalisti, gastroenterologu. Britansko gastroenterološko društvo navelo je sledeće dužnosti medicinskih sestara u centrima za zapaljenske bolesti creva: neophodno je da budu veza između pacijenta i ostalih članova multidisciplinarnog tima, treba da obezbede holističku podršku bolesniku i njegovoj porodici, obuče pacijente i članove porodice za samonegu, kao i da permanentno prate stanje pacijenta telefonom (9).

U R. Srbiji postoji Udruženje obolelih od zapaljenskih bolesti creva – UKUKS, koje permanentno radi na podršci obolelima i informisanju javnosti o značaju ovih oboljenja (6). Svetski dan obolelih od zapaljenskih bolesti creva obeležava se 19. maja svake godine, različitim kampanjama, koje imaju za cilj da prošire svest društva o tegobama kroz koje oboleli prolaze, kao i da ukažu na načine ranog prepoznavanja i lečenja ovih bolesti (10).

U ovom stručnom preglednom radu prikazani su najčešći problemi sa kojima se medicinske sestre/tehničari susreću u bolničkim uslovima tokom rada sa obolelima, kroz metod procesa zdravstvene nege (PZN), sa navedenim sestrinskim intervencijama za konkretan problem.

Simptomi i znaci zapaljenske bolesti creva

Manifestacije Kronove bolesti zavise od stepena zahvaćenosti obolelog dela digestivnog trakta, a zapaljenske promene mogu zahvatiti sve slojeve zida creva. Kronova bolest najčešće počinje u predelu terminalnog ileuma, a kod oko 40% pacijenata zahvaćeno je i tanko i debelo crevo (1).

U fazi pogoršanja bolesti osnovni simptomi su: dijareja sa velikim brojem stolica tokom dana (od 1 do 10), krv ili sluz u stolici, subfebrilna temperatura i abdominalni bolovi po tipu kolika. Gubitak u

telesnoj masi, malaksalost i umor se neretko javljaju kao posledica straha od uzimanja hrane (11). Osim manifestacija na digestivnom traktu, kod ove bolesti mogu se javiti i promene na koži u vidu osipa, poremećaj vida, bol u zglobovima, oštećenja bubrega i jetre (12).

Rano prepoznavanje bolesti podrazumeva posetu lekaru specijalisti, gastroenterologu, ukoliko osoba ima dijareju koja traje duže od nekoliko nedelja koja može biti praćena pojavom krvi ili sluzi u stolici, i ne reaguje na primenu standardne terapije, kao i ako je u kratkom vremenskom periodu došlo do značajnog gubitka telesne mase (12).

Ulcerozni kolitis zahvata samo sluznicu debelog creva, a zapaljenski proces u većini slučajeva počinje od rektuma. Simptomatologija je slična kao kod Kronove bolesti, odlikuju je prolivaste stolice više puta tokom dana, nekada i preko 10. Bolesnici uočavaju prisustvo krvi ili sluzi u stolici, javljaju se tenezmi, nadutost, bolovi u abdomenu i gubitak telesne mase (2,12).

Dijagnostikovanje zapaljenske bolesti creva

Dijagnostikovanje zapaljenskih bolesti creva nekada je veoma teško, a osim dobro uzete anamneze, fizikalnog i rektalnog pregleda, značaj u dijagnostici imaju laboratorijske analize (markeri zapaljenja: C-reaktivni protein, sedimentacija eritrocita, fekalni kalprotektin – protein koji ukazuje na zapaljenje lokalizovano u crevima, fibrinogen; kompletna krvna slika, jer se u najvećem broju slučajeva uočava anemija; biohemijske analize; testovi stolice da se isključe eventualne infekcije - *Clostridium-om difficile* ili drugim infektivnim agensima (13).

Zlatni standard u postavljanju dijagnoze zapaljenske bolesti creva je kolonoskopija sa pregledom terminalnog ileuma i uzimanjem uzorka za patohistološku analizu. Nuklearna magnetna rezonanca sa kontrastom može se primeniti da se proceni zahvaćenost zida creva zapaljenskim procesom, a kompjuterizovana tomografija da se ispita prisustvo komplikacija (12).

Lečenje zapaljenske bolesti creva

Osnovni ciljevi terapije su da se smiri zapaljenski proces i postigne klinička, laboratorijska i endoskopska remisija bolesti, kao i održavanje postignute remisije. U te svrhe primenjuje se nekoliko grupa lekova koji su prikazani u Tabeli 1 (2).

If these diseases are not recognized and treated on time, they can contribute to the irreversible damage of the digestive tract or permanent disability. Inflammatory bowel diseases often affect younger people aged between 15 and 35, while there is a significant increase in the number of patients in the pediatric population (2).

Patients with inflammatory bowel diseases have impaired quality of life and daily functioning, and they often need days off due to the symptoms and signs of the disease, as well as surgical interventions. The presence of the symptoms can make education and employment difficult for those affected by the disease, because they often have up to 10 stools a day (7). Social isolation, development of anxiety and depression are common among ill persons (8). However, the early recognition and application of adequate therapy can keep these diseases in remission for years (7).

It is necessary to raise public awareness about inflammatory bowel diseases through education, especially among young people. Education is needed in terms of recognizing the symptoms and importance of timely reporting to a specialist, gastroenterologist. The British Society of Gastroenterology has stated the following duties of nurses in centers for inflammatory bowel diseases: they should necessarily be the link between patients and other members of the multidisciplinary team, holistic support should be provided to the patient and his family, as well as the training of the patient and family members for self-care, and permanent monitoring of patient's condition by telephone (9).

In the Republic of Serbia, there is an Association of patients affected by inflammatory bowel diseases (Serbian: UKUKS), which permanently works to support patients and inform the public about the importance of these diseases (6). The world inflammatory bowel diseases day takes place on 19th May each year with different campaigns, whose aim is to raise awareness of problems that patients go through, as well as to point to the ways of early recognition and treatment of these diseases (10).

In this review article, the most frequent problems encountered by nurses/technicians in hospital conditions while working with patients are presented through the method of the health care process with the specified nursing interventions for the specific problem.

Symptoms and signs of inflammatory bowel diseases

The manifestations of Crohn's disease depend on the degree of involvement of the affected part of the digestive tract, while inflammatory changes can affect all layers of the intestinal wall. Crohn's disease begins most frequently in the area of the terminal ileum, and in about 40% of patients both small and large intestines are affected (1).

In the phase of worsening of the disease, the main symptoms are the following: diarrhea with a large number of stools during the day (from 1 to 10), blood or mucus in the stool, subfebrile temperature and colicky abdominal pain. The loss of body weight, weakness and fatigue often occur as a result of fear of eating food (11). In addition to manifestations in the digestive tract, changes on skin in the form of rash, visual impairment, pain in the joints, damage to kidneys and liver can occur in this disease (12).

The early recognition of the disease implies visiting a specialist, gastroenterologist if a person has diarrhea that lasts longer than several weeks and does not react to the application of standard therapy, if it is accompanied by the occurrence of blood or mucus in the stool, as well as if there has been a significant weight loss in a short period of time (12).

Ulcerative colitis affects only the mucosa of the colon, while the inflammatory process in most cases starts from the rectum. The symptomatology is similar to Crohn's disease, it is characterized by loose stools several times a day, sometimes even more than ten. Patients notice the presence of blood or mucus in the stool, tenesmus, flatulence, pain in the abdomen and the body weight loss occur (2,12).

Diagnosing inflammatory bowel disease

Diagnosing inflammatory bowel diseases is sometimes very difficult, and apart from a well-taken anamnesis, physical and rectal examination, laboratory analyses are important in diagnostics (markers of inflammation: C-reactive protein, sedimentation of erythrocytes, fecal calprotectin – protein that indicates inflammation localized in the intestines, fibrinogen; a complete blood count, because in most cases anemia is observed; biochemical analyses; stool tests to exclude possible infections – *Clostridium difficile* or other infectious agents) (13).

Tabela 1. Lekovi u terapiji zapaljenske bolesti creva

Koritkosteroidi	Aminosalicilati	Imunomodulatori	Biološka terapija
Primenjuju se kod umerenih i teških oblika Kronove bolesti. Smanjuju zapaljenski odgovor organizma. Zbog svojih neželenih efekata koriste se samo za indukciju remisije	Primenjuju se u lečenju blažih oblika ulceroznog kolitisa. Služe i za indukciju remisije i kao terapija održavanja blagih do umerenih oblika ulceroznog kolitisa.	Tiopurini (azatioprin) primenjuju se u terapiji održavanja i sprečavanju relapsa zapaljenskih bolesti creva. U slučaju netolerancije azatioprina, koristi se metotreksat kod pacijenata sa Kronovom bolešću.	Primenjuje se za lečenje najtežih oblika obe bolesti. Pravovremenom primenom postiže se zaceljenje sluznice creva i smanjuje broj relapsa bolesti, kao i potreba za hirurškim lečenjem.

Najteže forme bolesti koje ne reaguju na primenu lekova, ili kod kojih su prisutne komplikacije kao što su fistule, fisure, apsces i druge, moraju se tretirati hirurškim putem (11).

Zdravstvena nega obolelih od zapaljenskih bolesti creva

Oboleli od zapaljenskih bolesti creva mogu biti potpuno funkcionalni i obavljati svakodnevne aktivnosti ukoliko se bolest otkrije u ranoj fazi i primeni adekvatna terapija. Studija *Carels*-a i saradnika je došla do saznanja da 88,5% obolelih ispitanika smatra da im bolest značajno negativno utiče na kvalitet života (14). Reagovanje na bolest i terapiju je individualno, većina bolesnika može biti u dugogodišnjoj remisiji, ali ipak, kod nema-log broja pacijenata je neophodna hospitalizacija, kako bi se tretirale komplikacije. Ukoliko se iz bilo kog razloga jave komplikacije kao što su fistule, apscesi i dr, pacijent se mora lečiti u bolničkim uslovi-ma, a u skladu sa njegovim stanjem i potrebama za zdravstvenom negom, neophodno je napraviti plan nege (9).

Proces zdravstvene nege je složena višestapna metoda zasnovana na opštenaučnim principima i principima zdravstvene nege, koja je potpuno prilagođena individualnim potrebama korisnika za negom. Sastoji se iz pet faza koje su međusobno komplementarne i to su: utvrđivanje potreba za negom, definisanje dijagnoze nege i kolaborativnih problema, planiranje zdravstvene nege, realizacija plana nege i evaluacija (15).

Utvrđivanje potreba za zdravstvenom negom obolelih od zapaljenskih bolesti creva, pre svega, podrazumeva uzimanje sestrinske anamneze, odnosno razgovor sa bolesnikom, pri kom se prikupljaju podaci o njegovom trenutnom stanju, razlo-gu hospitalizacije, ranijim zdravstvenim problemi-ma, navikama u ishrani, konzumiranju cigareta,

alkohola i fizičkoj aktivnosti i dr. Prilikom razgovora sa bolesnikom posebnu pažnju bi trebalo posvetiti broju stolica na dnevnom nivou, izgledu fekalnih masa, eventualnom prisustvu krvi i sluzi u stolici, kao i pratećim simptomima (grčevi, tenezmi, na-dutost). Osim razgovora sa bolesnikom, strukovna medicinska sestra vrši inspekciju opšteg stanja bolesnika, antropometrijska merenja, kontroliše vitalne parametre, primenjuje numeričku skalu za procenu bola, Morseovu skalu za procenu rizika za pad i vodi listu bilansa tečnosti. Oboleli od zapalj-enskih bolesti creva često imaju gubitak telesne mase, mogu biti dehidrirani usled velikog broja stolica, te je neophodno proceniti stepen dehi-dratacije i voditi listu bilansa tečnosti (1,16,17).

Definisanje dijagnoze nege i kolaborativnih problema je sledeća faza procesa zdravstvene nege nakon utvrđenih potreba za zdravstvenom negom. Neke od najčešćih dijagnoza nege kod obolelih od zapaljenskih bolesti creva mogu biti: deficit znanja o osnovnoj bolesti, deficit samo-nege, rizik od poremećaja termoregulacije, rizik od dehidratacije, socijalna izolacija (15). Kolaborativni problemi koji prate zapaljenske bolesti creva su: dijareja (lat. *diarrhea*), povraćanje (lat. *vomitus*), pothranjenost (lat. *malnutrition*), abdominalni bol (lat. *dolor abdominalis*), povišena temperatura, anemija i depresija (16).

Tečne stolice (do 10 puta tokom dana) pred-stavljaju najčešći simptom koji bolesnike i dovodi kod gastroenterologa, jer kod zapaljenskih boles-ti creva tečne stolice traju duže od mesec dana i dovode do poremećaja opšteg stanja organizma (17). Medicinska sestra mora uzeti detaljne po-datke od bolesnika o broju stolica tokom dana, izgledu, konzistenciji, prisustvu krvi i sluzi kao i iz-vršiti inspekciju anogenitalne regije (16). Sestrin-ske intervencije koje je neophodno sprovesti kod ovog kolaborativnog problema su: praćenje i evi-

Tabela 1. Medications in the treatment of inflammatory bowel disease

Corticosteroids	Aminosalicylates	Immunomodulators	Biological therapy
They are used in moderate and severe forms of Crohn's disease. They reduce the inflammatory response of the body. Due to their side effects, they are used only for the induction of remission.	They are used for the treatment of mild forms of ulcerative colitis. They are used for the induction of remission, as well as the maintenance therapy of mild to moderate forms of ulcerative colitis.	Thiopurines (azathioprine) are used in the maintenance therapy and prevention of relapse of inflammatory bowel diseases. In case of intolerance to azathioprine, methotrexate is used in patients with Crohn's disease.	It is used for the treatment of most severe forms of both diseases. The mucosa of intestines heals with timely application and the number of relapses is reduced, as well as the need for surgical treatment.

The gold standard in diagnosing inflammatory bowel disease is colonoscopy with the examination of the terminal ileum and taking a sample for the pathohistological analysis. Contrast-enhanced nuclear magnetic resonance can be applied to assess the involvement of the small intestine wall by the inflammatory process, while computed tomography is used to examine the presence of complications (12).

Treatment of inflammatory bowel disease

The main treatment goals are to calm the inflammatory process and achieve clinical, laboratory and endoscopic remission of the disease, as well as to maintain the achieved remission. For this purpose, several groups of medications are applied, as shown in Table 1 (2).

The most severe forms of the disease, which do not respond to the use of drugs, or in which complications such as fistulas, fissures, abscess and others are present, must be treated surgically (11).

Health care of patients with inflammatory bowel disease

Patients with inflammatory bowel disease can be completely functional and perform daily activities if the disease is detected at an early stage and adequate therapy is applied. In a study by Carels and associates, it has been found that 88.5% of affected respondents believe that the disease has a significant negative impact on their quality of life (14). Reacting to the disease and therapy is individual, the majority of patients can be in long-term remission, however, a considerable number of patients need hospitalization in order to treat complications. If for any reason, complications such as fistulas, abscesses and other occur, the patient must be treated in hospital conditions, and in accordance with his condition and needs for

health care, it is necessary to make a care plan (9).

The process of health care is a complex multi-stage method based on general scientific principles and principles of health care, which is completely adapted to individual needs of care users. It consists of five phases that are mutually complementary, and they are the following: determination of needs for care, definition of diagnosis of care and collaborative problems, planning of health care, realization of care plan and evaluation (15).

Determining the needs for health care in patients with inflammatory bowel diseases involves, first of all, taking the nursing anamnesis, that is, conversation with the patient, during which nurses collect data on his current condition, reason for hospitalization, previous health problems, eating habits, smoking, consumption of alcohol and physical activity, etc. During this conversation with the patient, special attention should be paid to the number of stools per day, the appearance of fecal mass, possible presence of blood and mucus in the stool, as well as accompanying symptoms (cramps, tenesmus, flatulence). In addition to talking with the patient, the nurse inspects the patient's general condition, performs anthropometric measurements, controls vital parameters, implements a numerical scale for the assessment of pain, Morse scale for the assessment of risk of falling and keeps a fluid balance chart. Patients with inflammatory bowel diseases often have the loss of body weight, they can be dehydrated due to the large number of stools, and therefore, it is necessary to assess the degree of dehydration and keep a fluid balance chart (1,16,17).

Defining the diagnosis of care and collaborative problems is the next stage in the health care process after the need for health care has been identified. Some of the most common diagnoses

dentiranje izgleda i učestalosti stolice (sa posebnim osvrtnom na prisustvo krvi i sluzi); praćenje bilansa unete i izlučene tečnosti; procena rizika od dehidracije (inspekcija sluzokože usne duplje i praćenje turgora kože); nadoknada tečnosti par-enteralnim putem, prema nalogu ordinirajućeg lekara (terapija); adekvatna ishrana i medicinska nutritivna terapija uz konsultaciju nutricioniste; i redovna nega anogenitalne regije ako je pacijent nepokretan, a kod pokretnih obučavanje pacijenta za samonegu i uzakzivanje na značaj redovne nege kože (15,16).

Ciljevi i mogući ishodi sestrinskih intervencija doprinose da ne dođe do dehidracije tokom hospitalizacije. Bolesnik će demonstrirati pravilnu negu anogenitalne regije i redovno je sprovoditi, a imaće i adekvatan turgor i adekvatnu prebojenost kože i sluznica.

Bol u stomaku kod bolesnika sa zapaljenskim bolestima creva je po tipu grčeva, a ukoliko su praćeni mučninom i povraćanjem mogu ukazivati na suženje lumena creva (17). Za procenu bola medicinska sestra može koristiti numeričku ili neku drugu skalu u zavisnosti od stanja i uzrasta pacijenta. Osim procene jačine bola, neophodno je uzeti i anamnezu o bolu, pitati pacijenta o karakteristikama bola kao što su: propagacija, trajanje, faktori koji ga provociraju/olakšavaju, da li je pojava bola povezana sa uzimanje hrane i da li je do sada uzimao analgetsku terapiju. Sve podatke potrebno je dokumentovati (18). Sestrinske intervencije koje je neophodno sprovesti kod prisustva abdominalnog bola su: procena jačine bola primenom odgovarajuće skale, uzimanje anamneze o karakteristikama bola, postavljanje pacijenta u odgovarajući položaj, primena analgetske terapije po nalogu lekara, i informisanje pacijenta o neželjenim efektima analgetika (18,19). Ciljevi i mogući ishodi sestrinskih intervencija doprineće smanjivanju bola u abdomenu i mogu potpuno prestati za 48h. Takođe, bolesnik će biti informisan o neželjenim efektima i znati pravovremeno da ih prijavi medicinskoj sestri ukoliko se jave.

Povraćanje kao izolovan simptom se retko sreće kod zapaljenskih bolesti creva, obično ono prati abdominalni bol i ukazuje na suženje crevnog lumena. Posledica povraćanja može biti dehidracija i poremećaj opšteg stanja, te je neophodno da medicinska sestra svojim intervencijama predupredi ove komplikacije. Pomoć pacijentu koji povraća, praćenje izgleda i količine

povraćenog sadržaja i dokumentovanje su dužnosti medicinske sestre (16). Sestrinske intervencije koje se sprovode kod pacijenta koji povraća su: postavljanje pacijenta u odgovarajući položaj prilikom povraćanja (sedeći ili bočni položaj kod pacijenta koji je bez svesti); higijena usne duplje nakon povraćanja; praćenje izgleda i količine povraćenog sadržaja i dokumentovanje; adekvatna hidratacija pacijenta kao prevencija dehidracije, procena turgora kože i izgleda vidljivih sluzokoža; vođenje liste bilansa tečnosti; kontrola vitalnih parametara (15). Ciljevi i ishodi sestrinskih intervencija doprineće prestansku povraćanja za 24h, a takođe neće doći do dehidracije i vitalni parametri pacijenta biće u granicama referentnih vrednosti.

Pothranjenost se definiše kao nedovoljan unos nutrijenata koje posledično dovodi do smanjenja telesne mase. Kod pacijenata sa zapaljenskim bolestima creva može nastati usled smanjene apsorpcije hranljivih materija usled oštećene crevne sluznice ili zbog gubitka apetita i smanjenog unosa hrane (12). Sestrinske intervencije koje se sprovode kod pacijenta sa ovim problemom su: kontrola telesne mase svakog dana, procena rizika za dehidraciju, kontrola turgora kože i boje vidljivih sluznica, nutritivna terapija i konsultacija nutricioniste, izrada individualnog motivacija pacijenta da unosi manje, a češće obroke, kao i edukacija o načinu ishrane i namirnicama koje treba da izbegava (20). Ciljevi i ishodi sestrinskih intervencija doprineće da ne dođe do daljeg gubitka u telesnoj masi, pacijent će povećati telesnu masu za 10% za mesec dana, neće doći do dehidracije i pacijent će razumeti i prihvatiti novi način ishrane (20,21).

Slabost i malaksalost su česti simptomi zapaljenskih bolesti creva, pacijenti ih opisuju kao hronični umor i nedostatak energije. Kako se ove bolesti najčešće javljaju kod mladog, radno aktivnog stanovništva, hronična slabost i malaksalost značajno umanjuju kvalitet života i utiču na otežano obavljanje svakodnevnih aktivnosti (17). Kod hospitalizovanih pacijenata sa malaksalošću trebalo bi sprovoditi prevenciju pada (20). Sestrinske intervencije koje se sprovode kod pacijenta sa slabošću/malaksalošću su: procena stepena slabosti/malaksalosti, permanentan nadzor nad pacijentom, procena rizika za pad primenom Morseove skale, prevencija povreda, izbegavanje nepotrebnog napora, osiguranje odmora i sna, kao i primena pasivnih vežbi za održavanje mišićne snage (21). Ciljevi i ishodi sestrinskih intervencija

of care in patients affected by inflammatory bowel disease may be: lack of knowledge about the underlying disease, deficit of self care, risk of thermoregulation disorders, risk of dehydration, social isolation (15). Collaborative problems that accompany inflammatory bowel diseases are: diarrhea, vomiting, malnutrition, abdominal pain, fever, anemia and depression (16).

Liquid stools (up to 10 times a day) are the most common symptom that brings patients to the gastroenterologist, because in inflammatory bowel disease, liquid stools last longer than a month and lead to disorders related to the general state of the body (17). A nurse must take detailed information from the patient about the number of stools per day, appearance, consistency, presence of blood and mucus, and inspect the anogenital region (16). Nursing interventions that should necessarily be implemented in case of this collaborative problem are: monitoring and recording the appearance and frequency of the stool (with special reference to the presence of blood and mucus); monitoring the balance of taken and excreted fluids; the estimation of the risk of dehydration (inspection of the mucous membrane of the oral cavity and monitoring of the skin turgor); parenteral compensation of fluids, as prescribed by the attending doctor (therapy); adequate diet and medical nutritional therapy with the consultation of a nutritionist; and regular care of anogenital region if the patient is immobile, and for mobile patients, the patient is trained for self-care with an emphasis placed on the importance of regular skin care (15,16).

The goals and possible outcomes of nursing interventions contribute to the prevention of dehydration during hospitalization. The proper care of the anogenital region will be demonstrated to the patient and he will carry it out regularly, so he will have the adequate skin turgor and the adequate color of skin and mucous membranes.

The abdominal pain in patients with inflammatory bowel diseases is cramp-like, and if it is accompanied by nausea and vomiting, it may indicate the narrowing of the intestinal lumen (17). In order to assess the pain, a nurse can use a numerical or other scale depending on the patient's condition and age. In addition to the assessment of the pain intensity, it is necessary to take the anamnesis of that pain, to ask the patient about the characteristics of the pain such

as: propagation, duration, factors that provoke/alleviate it, whether the onset was related to the food they had taken and whether they had taken analgesic therapy to that moment. All data must be documented (18). Nursing interventions that must be performed when the abdominal pain is present are the following: assessing the pain intensity using the appropriate scale, taking anamnesis about the characteristics of the pain, placing the patient in the appropriate position, applying the analgesic therapy according to the doctor's order, and informing the patient about the side effects of analgesics (18,19). The goals and possible outcomes of nursing interventions will contribute to the alleviation of abdominal pain and it can completely stop in 48 hours. Also, the patient will be informed about side effects and he will know to report them to the nurse on time if they occur.

Vomiting as an isolated symptom is rarely encountered in inflammatory bowel diseases, it usually accompanies the abdominal pain and indicates the narrowing of the intestinal lumen. The consequence of vomiting can be dehydration and disturbance of the general condition, and therefore, the nurse should necessarily prevent these complications with her interventions. Helping the patient who is vomiting, monitoring the appearance and amount of vomited contents and keeping records are nurse's duties (16). Nursing interventions that are carried out when a patient is vomiting are the following: placing the patient in the appropriate position during vomiting (sitting or lateral position in an unconscious patient); hygiene of the oral cavity after vomiting; monitoring the appearance and amount of vomited contents and keeping records; adequate hydration of the patient as the prevention of dehydration, the assessment of skin turgor and appearance of visible mucous membranes; keeping a fluid balance chart; control of vital parameters (15). The goals and outcomes of nursing interventions will contribute to the cessation of vomiting in 24 hours, and dehydration will also not occur and the patient's vital parameters will be within reference values.

Malnutrition is defined as an insufficient intake of nutrients, which consequently leads to a decrease in body weight. In patients with inflammatory bowel diseases, it can appear due to the reduced absorption of nutrients because of the damaged intestinal mucosa or due to the loss of

preveniraće povrede/padove, a slabost/malaksalost će biti manje intenziteta (21).

Nedovoljna ili potpuna neinformisanost pacijenta o svojoj bolesti predstavlja ključni problem za dobro zbrinjavanje ovih pacijenata. Može se odnositi na nedovoljnu upućenost o značaju pravilne ishrane i u tom smeru je potrebno sprovoditi edukaciju pacijenta (20). Prilikom uzimanja sestrinske anamneze potrebno je proceniti znanje pacijenta o bolesti, ili roditelja, ukoliko je u pitanju dete. Potrebno je ukazati na značaj ishrane u aktivnoj fazi bolesti kada je prisutna dijareja, a kasnije se pacijentu savetuje da sam proba hranu koja mu prija, a izbegava one namirnice koje izazivaju tegobe (17). Osim toga, pacijenta je potrebno edukovati i o načinu primene terapije, u početku kada se primenjuje kortikosteroidna terapija potrebno je proceniti da li je pacijent razumeo način doziranja i primene lekova. Kada se u terapiju uključe i drugi lekovi, kao što su npr. imunomodulatori, pacijent mora redovno kontrolisati krvnu sliku kako bi se na vreme prepoznali eventualni neželjeni efekti leka (12). Sestrinske intervencije koje se odnose na ovu dijagnozu nege doprineće edukaciji pacijenta o važnosti ishrane za kontrolu bolesti, informisanju pacijenta o neželjenim efektima lekova i načinu njihovog prepoznavanja, kao i procenu razumevanja pruženih informacija od strane pacijenta (23). Ciljevi i ishodi sestrinskih intervencija omogućiće da pacijent razume osnovne informacije o svojoj bolesti, da se pridržava dijetetskog režima, kao i da zna da primeni različite grupe lekova koji su propisani od strane lekara i da nabroji njihove neželjene efekte, kao i način kako da ih na vreme prepozna (23).

Dehidracija predstavlja gubitak vode i/ili elektrolita iz organizma izazvan različitim poremećajima, a kod pacijenata sa zapaljenjskim bolestima creva je posledica velikog broja tečnih stolica i/ili povraćanja. U kliničkoj slici postoji jaka žeđ, suva koža i vidljive sluznice, jezik suv i obložen, smanjen trugor kože. U zavisnosti od stepena dehidracije može doći do poremećaja svesti (17). Sestrinske intervencije koje se sprovode u cilju sprečavanja dehidracije su: kontrola vitalnih parametara, vođenje liste bilansa tečnosti, procena stanja i izgleda kože i vidljivih sluznica, adekvatna hidracija bolesnika, posebno dok su prisutne tečne stolice, kao i nadoknada tečnosti parenteralnim putem po nalogu lekara (20). Ciljevi i ishodi sestrinskih intervencija sprečiće da dođe do dehidracije, koža i

vidljive sluznice biće adekvatnog izgleda, a bilans unete i izlučene tečnosti će biti pozitivan (21-23).

Pacijenti oboleli od zapaljenjskih bolesti creva smatraju da njihova bolest značajno utiče na mnoge aspekte njihovog života kao što su obrazovanje, socijalizacija i zaposlenje. Velika evropska studija sprovedena u saradnji sa udruženjima pacijenata koji boluju od zapaljenjskih bolesti creva otkrila je da 50% pacijenata smatra da ih bolest sprečava da imaju emotivne veze (24). Medicinske sestre mogu pružiti pacijentima informacije o udruženjima obolelih ili drugim organizacijama za podršku, a tokom hospitalizacije mogu podsticati komunikaciju sa drugim pacijentima ili uključiti druge stručnjake sa ciljem pružanja podrške pacijentu (9). Sestrinske intervencije koje se sprovode u cilju smanjenja socijalne izolacije pacijenta su: ohrabrivanje pacijenta za održavanje socijalnih kontakata, upoznavanje sa drugim hospitalizovanim pacijentima i razmena iskustava – prikaz pozitivnih primera iz prakse, informisanje pacijenta o organizacijama za podršku i udruženjima obolelih, uključivanje drugih stručnjaka (psihologa) sa ciljem podrške pacijentu za prihvatanje i suočavanje sa osnovnom bolešću (9). Ciljevi i ishodi sestrinskih intervencija preveniraće da dođe do socijalne izolacije pacijenta i da pacijent komunicira sa drugim hospitalizovanim pacijentima (9).

Zaključak

Medicinska sestra je važan član multidisciplinarnog zdravstvenog tima koji učestvuje u zbrinjavanju pacijenata za zapaljenjskim bolestima creva, kako sa stanovišta kliničkog zbrinjavanja, tako i za pružanje kontinuirane psihološke podrške pacijentima. Osim toga ima i organizacione dužnosti, jer se ovi pacijenti kontinuirano prate, i kada nisu hospitalizovani.

Primenom procesa zdravstvene nege postiže se holistički pristup pacijentima sa ovim komplikovanim bolestima. Strukovna/diplomirana medicinska sestra mora kontinuirano sprovoditi zdravstveno-vaspitni rad sa pacijentima, edukaciju o značaju pravilne ishrane i adekvatnoj primeni terapije, kao i pravovremenom prepoznavanju znakova relapsa bolesti i javljanja lekaru.

Konflikt interesa

Autori su izjavili da nema konflikta interesa.

appetite and reduced intake of food (12). Nursing interventions that are performed in patients with this problem are: control of body weight every day, assessment of risk of dehydration, control of skin turgor and visible mucosa, nutritive therapy and consultations with a nutritionist, the creation of an individual diet plan, monitoring the amount of food intake, motivating the patient to take smaller and more frequent meals, as well as education about diet and foods to avoid (20). The goals and outcomes of nursing interventions will contribute to prevent further body weight loss, the patient's body weight will increase by 10% in a month, dehydration will not occur and the patient will understand and accept the new diet (20,21).

Weakness and malaise are common symptoms of inflammatory bowel diseases, which patients describe as chronic fatigue and lack of energy. Since these diseases most often occur in the young, employed population, chronic weakness and malaise significantly reduce the quality of life and influence the performance of daily activities (17). In hospitalized patients who experience weakness, the prevention of fall should be implemented (20). Nursing interventions that are performed in patients with weakness/malaise are: the assessment of the degree of weakness/malaise, permanent monitoring of the patient, the assessment of fall risk factor using Morse scale, the prevention of injuries, avoiding the unnecessary exertion, ensuring rest and sleep, as well as the application of passive exercises for the maintenance of muscle strength (21). The goals and outcomes of nursing interventions will prevent injuries/falls, while weakness/malaise will be less intense (21).

Insufficient or complete lack of information about the patient's illness is a key problem for good care of these patients. It can relate to the insufficient awareness of the importance of proper nutrition and therefore, it is necessary to educate the patient in that direction (20). When taking the nursing anamnesis, it is necessary to assess the patient's knowledge about the disease or parents' knowledge if the patient is a child. It is necessary to point out the importance of nutrition in the active phase of the disease when diarrhea is present, and later the patient is advised to try the food he likes and avoid those groceries which cause problems (17). In addition, the patient needs to be educated how therapy is administered,

in the beginning when corticosteroid therapy is administered, it is necessary to assess whether the patient understood how drugs are dosed and administered. When other drugs are included in the therapy, such as, for example immunomodulators, the patient must regularly check the blood count in order to recognize side effects of the drug on time (12). Nursing interventions related to this diagnosis of care will contribute to the education of the patient about the importance of nutrition for disease control, informing the patient about side effects of drugs and how to recognize them, as well as assessing the patient's understanding of the information provided (23). The goals and outcomes of nursing interventions will enable the patient to understand the basic information about his disease, to adhere to the dietary regime, as well as to know how to administer different groups of drugs prescribed by the doctor, to list their side effects and how to recognize them on time (23).

Dehydration is the loss of water and/or electrolytes from the body caused by different disorders, while in patients with inflammatory bowel disease, it is the consequence of a large number of loose stools and/or vomiting. The clinical picture is characterized by strong thirst, dry skin and dry visible mucous membranes, dry and coated tongue, reduced skin turgor. Depending on the degree of dehydration, a disturbance of consciousness can occur (17). Nursing interventions that are performed in order to prevent dehydration are: control of vital parameters, keeping a fluid balance chart, the assessment of the condition and appearance of skin and visible mucous membranes, adequate hydration of patients, especially when he has loose stools, as well as the parenteral compensation of fluids as ordered by the doctor (20). The goals and outcomes of nursing interventions will prevent dehydration, the skin and visible mucous membranes will have the adequate appearance, while the balance of taken and excreted fluids will be positive (21-23).

Patients affected by inflammatory bowel diseases think that their disease significantly influences many aspects of their lives such as education, socialization and employment. A large European study conducted in cooperation with associations of patients suffering from inflammatory bowel diseases revealed that 50% of patients believed that the disease prevented

Reference

1. Baumgart DC, Sandborn WJ. Inflammatory bowel disease: clinical aspects and established and evolving treatments. *The Lancet*. 2007;369(9573):1641–57. doi: 10.1016/S0140-6736(07)60751-X
2. Xu F, Dahlhamer JM, Zammitti EP, Wheaton AG, Croft JB. Health-risk behaviors and chronic conditions among adults with inflammatory bowel disease — United States, 2015 and 2016. *MMWR Morb Mortal Wkly Rep*. 2018;67:190–195.
3. Feuerstein JD, Cheifetz AS. Crohn Disease: Epidemiology, Diagnosis, and Management. *Mayo Clin Proc*. 2017;92(7):1088-103. doi: 10.1016/j.mayocp.2017.04.010
4. Feuerstein JD, Cheifetz AS. Ulcerative Colitis: Epidemiology, Diagnosis, and Management. *Mayo Clin Proc*. 2014;89(11):1553-63. doi: 10.1016/j.mayocp.2014.07.002
5. Molodecky NA, Soon IS, Rabi DM, Ghali WA, Ferris M, Chernoff G et al. Increasing incidence and prevalence of the inflammatory bowel diseases with time, based on systematic review. *Gastroenterology*. 2012;142:46–54. doi: 10.1053/j.gastro.2011.10.001
6. Ukuks.rs. [Internet]. [cited 25 Jun 2024]. Available from: <https://ukuks.org/>
7. Knowles SR, Graff LA, Wilding H, Hewitt C, Keefer L, Mikocka-Walus A. Quality of Life in Inflammatory Bowel Disease: A Systematic Review and Meta-analyses—Part I. *Inflamm Bowel Dis*. 2018;24(4):742–51. doi: 10.1093/ibd/izx100
8. Mikocka-Walus A, Knowles SR, Keefer L, Graff L. Controversies revisited: a systematic review of the comorbidity of depression and anxiety with inflammatory bowel diseases. *Inflamm Bowel Dis*. 2016;22:752–62. doi: 10.1097/MIB.0000000000000620
9. Rosso C, Aaron AA, Armandi A et al. Inflammatory Bowel Disease Nurse-Practical Messages. *Nurs Rep*. 2021;11(2):229-41. doi: 10.3390/nursrep11020023
10. World IBD Day.org [Internet]. [cited 22 Jun 2024]. Available from: <https://worldibdday.org/>
11. Torres J, Mehandru S, Colombel JF, Peyrin-Biroulet L. Crohn's disease. *Lancet*. 2017;389(10080):1741-55. doi: 10.1016/S0140-6736(16)31711-1
12. Sokić-Milutinović A. Kako prepoznati i lečiti pacijenta sa inflamatornim bolestima creva. *Arh. Farm*. 2017;67: 91-111.
13. Veauthier B, Hornecker JR. Crohn's Disease: Diagnosis and Management. *Am Fam Physician*. 2018;98(11):661-69.
14. Carels C, Wauters L, Outtier A, et al. Health Literacy and Quality of Life in Young Adults From The Belgian Crohn's Disease Registry Compared to Type 1 Diabetes Mellitus. *Front Pediatr*. 2021;9:624416. doi: 10.3389/fped.2021.624416
15. Rudić R, Kocev N, Munćan B. Proces zdravstvene nege. Beograd: Naučna; 2008.
16. Manojlović S, Matić Đ. Zdravstvena nega u internoj medicini: intervencije medicinskih sestara. Beograd: Zavod za udžbenike i nastavna sredstva; 2010.
17. Tarabar D. Inflamatorne bolesti creva. Beograd: Bit inženjering d.o.o.; 2011.
18. Bogdanović Vasić S, Pavić K. Zdravstvena nega. Šabac: Slobodanka Bogdanović Vasić; 2022.
19. Norton C, Czuber-Dochan W, Artom M, Sweeney L, Hart A. Systematic review: interventions for abdominal pain management in inflammatory bowel disease. *Aliment Pharmacol Ther*. 2017;46(2):115-25. doi: 10.1111/apt.14108
20. Kemp K, Dibley L, Chauhan U, et al. Second N-ECCO Consensus Statements on the European Nursing Roles in Caring for Patients with Crohn's Disease or Ulcerative Colitis. *J Crohns Colitis*. 2018;12(7):760–76. doi: 10.1093/ecco-jcc/jjy020.
21. Mentella MC, Scaldaferrri F, Pizzoferrato M, Gasbarrini A, Miggiano GAD. Nutrition, IBD and Gut Microbiota: A Review *Nutrients*. 2020;12(4):944. doi: 10.3390/nu12040944.
22. Farrell D, Artom M, Czuber-Dochan W, Jelsness-Jørgensen LP, Norton C, Savage E. Interventions for fatigue in inflammatory bowel disease. *Cochrane Database Syst Rev*. 2020;4(4):CD012005. doi: 10.1002/14651858.CD012005.pub2
23. Wagner M. Crohn's Disease: Nursing Diagnoses, Care Plans, Assessment & Interventions. 2023. [Internet] [cited April 04 2024]. Available from: <https://www.nursetogether.com/crohns-disease-nursing-diagnosis-care-plan/#references>
24. Ghosh S, Mitchell R. Impact of inflammatory bowel disease on quality of life: Results of the European Federation of Crohn's and Ulcerative Colitis Associations (EFCCA) patient survey. *J. Crohn's Colitis*. 2007;1:10–20. doi: 10.1016/j.crohns.2007.06.005.

them from having emotional relationships (24). Nurses can provide patients with information about patient associations or other organizations offering support, and during hospitalization they can encourage communication with other patients or involve other professionals in order to provide support to the patient (9). Nursing interventions that are performed in order to reduce the patient's social isolation are the following: encouraging the patient to maintain social contacts, getting to know other hospitalized patients and sharing experiences – presentation of positive examples from practice, informing the patient about organizations that provide support and patients' associations, involving other experts (psychologists) with the aim of supporting the patient to accept and cope with the underlying disease (9). The goals and outcomes of nursing interventions will prevent the patient's social isolation and contribute to his communication with other hospitalized patients (9).

Conclusion

A nurse is an important member of the multidisciplinary health team, who participates in the care of patients with inflammatory bowel diseases, both in terms of the clinical care and continuous psychological support provided to patients. In addition, nurses have organizational duties because these patients are continuously monitored, even when they are not hospitalized.

With the implementation of the healthcare process, a holistic approach to patients with these complicated diseases is achieved. A professional/graduate nurse must continuously carry out health-educational work with patients, education about the importance of proper diet and adequate administration of therapy, as well as timely recognition of signs of disease relapse and reporting to the doctor.

Competing interests

The authors declared no competing interests.

References

- Baumgart DC, Sandborn WJ. Inflammatory bowel disease: clinical aspects and established and evolving treatments. *The Lancet*. 2007;369(9573):1641–57. doi: 10.1016/S0140-6736(07)60751-X
- Xu F, Dahlhamer JM, Zammitti EP, Wheaton AG, Croft JB. Health-risk behaviors and chronic conditions among adults with inflammatory bowel disease — United States, 2015 and 2016. *MMWR Morb Mortal Wkly Rep*. 2018;67:190–195.
- Feuerstein JD, Cheifetz AS. Crohn Disease: Epidemiology, Diagnosis, and Management. *Mayo Clin Proc*. 2017;92(7):1088–103. doi: 10.1016/j.mayocp.2017.04.010
- Feuerstein JD, Cheifetz AS. Ulcerative Colitis: Epidemiology, Diagnosis, and Management. *Mayo Clin Proc*. 2014;89(11):1553–63. doi: 10.1016/j.mayocp.2014.07.002
- Molodecky NA, Soon IS, Rabi DM, Ghali WA, Ferris M, Chernoff G et al. Increasing incidence and prevalence of the inflammatory bowel diseases with time, based on systematic review. *Gastroenterology*. 2012;142:46–54. doi: 10.1053/j.gastro.2011.10.001
- Ukuks.rs. [Internet]. [cited 25 Jun 2024]. Available from: <https://ukuks.org/>
- Knowles SR, Graff LA, Wilding H, Hewitt C, Keefer L, Mikocka-Walus A. Quality of Life in Inflammatory Bowel Disease: A Systematic Review and Meta-analyses—Part I. *Inflamm Bowel Dis*. 2018;24(4):742–51. doi: 10.1093/ibd/izx100
- Mikocka-Walus A, Knowles SR, Keefer L, Graff L. Controversies revisited: a systematic review of the comorbidity of depression and anxiety with inflammatory bowel diseases. *Inflamm Bowel Dis*. 2016;22:752–62. doi: 10.1097/MIB.0000000000000620
- Rosso C, Aaron AA, Armandi A et al. Inflammatory Bowel Disease Nurse-Practical Messages. *Nurs Rep*. 2021;11(2):229–41. doi: 10.3390/nursrep11020023
- World IBD Day.org [Internet]. [cited 22 Jun 2024]. Available from: <https://worldibdday.org/>
- Torres J, Mehandru S, Colombel JF, Peyrin-Biroulet L. Crohn's disease. *Lancet*. 2017;389(10080):1741–55. doi: 10.1016/S0140-6736(16)31711-1
- Sokić-Milutinović A. How to recognize and treat patients with inflammatory bowel disease. *Arh.Farm*. 2017;67: 91–111.
- Veauthier B, Hornecker JR. Crohn's Disease: Diagnosis and Management. *Am Fam Physician*. 2018;98(11):661–69.
- Carels C, Wauters L, Outtier A, et al. Health Literacy and Quality of Life in Young Adults From The Belgian Crohn's Disease Registry Compared to Type 1 Diabetes Mellitus. *Front Pediatr*. 2021;9:624416. doi: 10.3389/fped.2021.624416
- Rudić R, Kocev N, Munćan B. Health care process. Belgrade: Naučna; 2008.
- Manojlović S, Matić Đ. Health care in internal medicine: nursing interventions. Belgrade: Institute for Textbooks and Educational Resources; 2010.
- Tarabar D. Inflammatory bowel diseases. Belgrade: Bit inženjering d.o.o.; 2011.
- Bogdanović Vasić S, Pavić K. Health Care. Šabac: Slobodanka Bogdanović Vasić; 2022.
- Norton C, Czuber-Dochan W, Artom M, Sweeney L, Hart A. Systematic review: interventions for abdominal pain management in inflammatory bowel disease. *Aliment Pharmacol Ther*. 2017;46(2):115–25. doi: 10.1111/apt.14108



License: This is an open access article under the terms of the Creative Commons Attribution 4.0 License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2024 Health Care.

Primljen: 15.07.2024. **Revizija:** 01.08.2024. **Prihvaćen:** 01.08.2024.

20. Kemp K, Dibley L, Chauhan U, et al. Second N-ECCO Consensus Statements on the European Nursing Roles in Caring for Patients with Crohn's Disease or Ulcerative Colitis. *J Crohns Colitis*. 2018;12(7):760–76. doi: 10.1093/ecco-jcc/jjy020.
21. Mentella MC, Scaldaferri F, Pizzoferrato M, Gasbarrini A, Miggiano GAD. Nutrition, IBD and Gut Microbiota: A Review *Nutrients*. 2020;12(4):944. doi: 10.3390/nu12040944.
22. Farrell D, Artom M, Czuber-Dochan W, Jelsness-Jørgensen LP, Norton C, Savage E. Interventions for fatigue in inflammatory bowel disease. *Cochrane Database Syst Rev*. 2020;4(4):CD012005. doi: 10.1002/14651858.CD012005.pub2
23. Wagner M. Crohn's Disease: Nursing Diagnoses, Care Plans, Assessment & Interventions. 2023. [Internet] [cited April 04 2024]. Available from: <https://www.nursetogether.com/crohns-disease-nursing-diagnosis-care-plan/#references>
24. Ghosh S, Mitchell R. Impact of inflammatory bowel disease on quality of life: Results of the European Federation of Crohn's and Ulcerative Colitis Associations (EFCCA) patient survey. *J. Crohn's Colitis*. 2007;1:10–20. doi: 10.1016/j.crohns.2007.06.005.



License: This is an open access article under the terms of the Creative Commons Attribution 4.0 License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2024 Health Care.

Received: 07/15/2024

Revised: 08/01/2024

Accepted: 08/01/2024