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Klinički tok i kvalitet života bolesnika sa Takajašijevim arteritisom - prikaz bolesnika

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Clinical Management and Quality of Life in a Patient with Takayasu Arteritis: A Case Report

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Sažetak

Uvod. Takajaši arteritis je hroničan, imunološki posredovan vaskulitis velikih krvnih sudova. Zastupljen je širom sveta, sa godišnjom incidencijom 0,3–3,4 na milion stanovnika. Bolest prvenstveno pogađa mlade žene, a prosečna starost u trenutku postavljanja dijagnoze iznosi oko 33 godine. Blagovremeno postavljanje dijagnoze ima povoljan uticaj na tok bolesti, terapijski ishod i kvalitet života.

Prikaz bolesnika. Prikazana je pacijentkinja sa Takajaši arteritisom od koga boluje unazad četiri godine. Dijagnoza je postavljena na osnovu anamneze, kliničkog pregleda, laboratorijskih analiza, ehosonografije, MSCT, PET/CT. Za procenu radne sposobnosti, kao i fizičkog i mentalnog stanja pacijentkinje korišćen je upitnik SF-36. Pacijentkinja je redovno kontrolisana i trenutno se nalazi u fazi remisije bolesti. Rezultati upitnika SF-36 ukazuju na neznatne fizičke tegobe, dok je najveći uticaj bolesti u domenu psihičkog zdravlja i socijalnih odnosa. Porodični odnosi su očuvani, a pacijentkinja je radno angažovana sa četvorodnevnom radnom nedeljom. Jedini faktor koji pozitivno utiče na tok bolesti i kvalitet života pacijentkinje je remisija bolesti.

Zaključak. Takajaši arteritis je bolest progresivnog toka sa značajnim uticajem na svakodnevno funkcionisanje. Kod blagovremeno dijagnostikovanih pacijenata mlađe životne dobi češće se postiže remisija bolesti koja, pored sprečavanja komplikacija, predstavlja najznačajniji faktor postizanja dobrog kvaliteta života. Stoga je potrebno uložiti napor radi skraćenja vremena potrebnog za postavljanje dijagnoze i postizanje remisije bolesti kod već dijagnostikovanih pacijenata.

Ključne reči: Takajaši arteritis, kvalitet života, radna sposobnost, remisija bolesti, dijagnoza, ehosonografija

Abstract

Introduction: Takayasu arteritis is a chronic, immune-mediated vasculitis affecting large blood vessels. It is reported worldwide, with an annual incidence ranging from 0.3 to 3.4 cases per million people. The disease predominantly affects young women, with the mean age at diagnosis being approximately 33 years. Early recognition and timely diagnosis exert a favorable influence on disease progression, therapeutic outcomes, and overall quality of life.

Case Report. The patient presented is a woman with Takayasu arteritis, which she has been suffering from for the past four years. The diagnosis was established based on medical history, clinical examination, laboratory analyses, echography, MSCT, and PET/CT. To assess work capacity as well as physical and mental status, the SF-36 questionnaire was used. The patient has been regularly monitored and is currently in remission from the disease. Results of the SF-36 questionnaire indicate minor physical complaints, while the greatest impact of the disease is observed in the domains of psychological health and social relationships. Family relations remain intact, and the patient is employed, working a four-day workweek. The only factor positively influencing the course of the disease and the patient’s quality of life is disease remission.

Conclusion. Takayasu arteritis is a progressive disease with a significant impact on daily functioning. In patients diagnosed at a younger age, remission is more frequently achieved, which—alongside the prevention of complications—represents the most important factor in attaining a good quality of life. Therefore, efforts should be directed toward reducing the time required for establishing the diagnosis and achieving remission in patients who have already been diagnosed.

Keywords: Takayasu arteritis, quality of life, work capacity, remission induction, diagnosis, ultrasonography

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Uvod

Takajaši arteritis (TA) je hroničan, imunološki posredovan vaskulitis velikih krvnih sudova. Prvenstveno zahvata aortu i njene glavne grane: karotidne arterije, subklavije, bubrežne, koronarne, digestivne i ilijačne arterije. Poznat je i kao bolest bez pulsa, sindrom luka aorte, tromboaortopatija i tromboarteriopatija[1].

Ukupna godišnja incidencija Takajaši arteritisa je 0,3–3,4, a prevalencija 0,9–40 na milion stanovnika. Takajašijev arteritis pogađa prvenstveno mlade žene u drugoj i trećoj deceniji života, a prosečna starost u momentu dijagnoze je 33 godine. Japansko nacionalno istraživanje pokazalo je da je 90% pacijenata bilo ženskog pola, iako je međunarodno istraživanje pokazalo niži odnos polova. TA je rasprostranjen u azijskim zemljama i Latinskoj Americi, iako je rasprostranjen širom sveta. Smatra se ređim kod belaca. Uočeno je da postoje i neke razlike u mestima pogođenim aortoarteritisom među različitim zemljama. Kod japanskih pacijenata, uzlazna aorta i aortni luk sa svojim granama su češće zahvaćeni, dok su kod pacijenata iz Koreje, Indije i zapadnih zemalja najčešće zahvaćene abdominalna aorta i bubrežne arterije[2].

Ispoljavanje simptoma bolesnika sa TA može biti nejasno. Najčešće tegobe su mijalgija, artralgija, glavobolja i (pre)sinkopa. Smatra se da nespecifična priroda ovih tegoba dovodi do kašnjenja u postavljanju dijagnoze koja se često viđa u bolesnika sa TA. U većini slučajeva postoji kašnjenje od jedne godine od pojave simptoma do postavljanja dijagnoze. Nespecifični simptomi i kasnija pojava vaskularnih komplikacija kod pacijenata sa TA dovodi i do posledičnog kašnjenja blagovremene terapije. Kao posledica toga, 47–55% pacijenata je bilo podvrgnuto vaskularnom hirurškom zahvatu neposredno po postavljanju dijagnoze[3, 4]. Koronarna revaskularizacija obuhvata najveću skupinu operacija, a slede je karotidna revaskularizacija i revaskularizacija gornjih ekstremiteta. Mnogi pacijenti bili su podvrgnuti više nego jednom zahvatu na različitim lokacijama, što potvrđuje činjenicu da TA utiče na više regija aorte i njenih ogranaka. U prošlosti se na stentiranje/angioplastiku kod ovih pacijenata gledalo sa skepsom zbog visokih stopa restenoze. Trenutno, čini se da su kratke žarišne lezije najprikladnije za endovaskularno postavljanje stentova. Inače, premosnica pruža najbolje dugoročne rezultate zbog sklonosti progresiji bolesti, a što u velikoj meri doprinosi značajnom povećanju kvaliteta života pacijenata obolelih od TA[5].

Introduction

Takayasu arteritis (TA) is a chronic, immune-mediated vasculitis of large blood vessels. It primarily affects the aorta and its major branches, including the carotid arteries, subclavian arteries, renal arteries, coronary arteries, mesenteric arteries, and iliac arteries. It is also known as “pulseless disease,” “aortic arch syndrome,” “thromboaortopathy,” and “thromboarteriopathy.”[1]

The overall annual incidence of Takayasu arteritis is 0.3–3.4, while the prevalence ranges from 0.9 to 40 per million inhabitants. Takayasu arteritis primarily affects young women in their second and third decades of life, with the average age at diagnosis being 33 years. A Japanese national survey showed that 90% of patients were female, although international studies reported a lower female-to-male ratio. TA is widespread in Asian countries and Latin America, although it is present worldwide. It is considered less common among Caucasians. Differences have also been observed in the vascular sites affected by aortoarteritis across various countries. In Japanese patients, the ascending aorta and the aortic arch with its branches are more frequently involved, whereas in patients from Korea, India, and Western countries, the abdominal aorta and renal arteries are most commonly affected.[2]

The manifestation of symptoms in patients with TA can be unclear. The most common complaints include myalgia, arthralgia, headache, and (pre)syncope. The nonspecific nature of these symptoms is considered to contribute to delays in establishing the diagnosis, which is frequently observed in patients with TA. In most cases, there is a delay of approximately one year from the onset of symptoms to the confirmation of diagnosis. Nonspecific symptoms and the later occurrence of vascular complications in TA patients also result in subsequent delays in timely therapy. As a consequence, 47–55% of patients underwent vascular surgery immediately upon diagnosis.[3,4] Coronary revascularization represents the largest group of procedures, followed by carotid revascularization and revascularization of the upper extremities. Many patients required more than one intervention at different sites, confirming that TA affects multiple regions of the aorta and its branches. In the past, stenting/angioplasty in these patients was approached with skepticism due to high rates of restenosis. Currently, short focal lesions appear to be the most suitable for endovascular stent placement. Nevertheless, bypass surgery provides the best long-term outcomes given the progressive nature of the disease, which significantly contributes to improved quality of life in patients with TA.[5]

Cilj rada

Cilj rada je bio da se prikaže ishod primenjenih terapijskih mera, proceni kvalitet života kod pacijentkinje sa Takajaši arteritisom, uporede dobijeni rezultati sa ishodima obolelih od Takajaši arteritisa u objavljenim studijama, kao i da se prikažu nove smernice za unapređenje stepena kvaliteta života kod ovih pacijenata.

Prikaz bolesnika

Pacijentkinja stara 41 godinu, kojoj je u 37. godini dijagnostikovan Takajašijev arteritis, prvi put se javlja lekaru 2021. godine sa simptomima otežanog disanja, ubrzanog rada srca i povremenih osećajem preskakanja srčanog ritma. Od jula 2021. navodi izražen umor, trnjenje u ekstremitetima i učestalije preskakanje i lupanje srca. Septembra meseca iste godine navodi nemogućnost merenja pritiska na oba gornja ekstremiteta. Novembra meseca 2021. navodi ubrzano zamaranje i gubitak snage u levoj ruci. Od januara 2022. ima probadanje u grudima pri izlaganju hladnom vazduhu, osećaj trnjenja i nelagodan bol u nogama.

Fizikalni pregled pokazuje uredan nalaz na srcu i plućima, uz čujne šumove nad obe karotidne arterije. Puls desne arterije radijalis veoma oslabljen, a puls leve arterije radijalis se ne palpira. Oslabljeni pulsevi na arteriji tibijalis levo i arteriji poplitei levo. U toku novembra meseca - nepalpabilni pulsevi na obe arterije radijalis i obe arterije brahijalis. Nemerljiv krvni pritisak obostrano.

Laboratorijske analize iz septembra 2021. pokazale su povećanu sedimentaciju eritrocita (38 mm/1h) i povećan nivo C-reaktivnog proteina (CRP) od 19,7 mg/L.

Color Doppler ehosonografija krvnih sudova vrata pokazuje postojanje stenoze leve zajedničke karotidne arterije (ACC) od 75–90% i desne ACC od 70–85%. Obe ACC u proksimalnim segmentima imaju skoro uniformno zadebljale zidove (znak ‘’makarona’’) sa stenozom od 70%. Obostrano, značajna stenoza subklavijskih arterija.

CT angiografija glave i vrata pokazuje sledeće nalaze: desna ACC je čitavim tokom redukovanog lumena do 60%. Desna arterija subklavija, distalno od odvajanja arterije vertebralis, redukovanog je lumena preko 90%. Leva ACC je proksimalno redukovanog lumena sa najvećom stenozom preko 65%. Leva unutrašnja karotidna arterija (ACI) je nakon bulbusa sužena mešovitim plakom do 50%. Leva arterija subklavija, posle odvajanja arterije vertebralis, redukovanog lumena preko 90% u dužini većoj od 2,5 cm.

PET/CT je pokazao pojačanu akumulaciju fludeoksiglukoze (FDG) u zidu obe zajedničke karotidne arterije, intenzivnije levo. Uočena je umereno pojačana akumulacija FDG u početnim delovima obe arterije subklavije. Diskretno pojačana akumulacija FDG prisutna je u nivou zida luka aorte i početnog dela descendentne aorte. Nalaz ukazuje na FDG

Objective

The aim of this study was to present the outcome of applied therapeutic measures, to assess the quality of life in a female patient with Takayasu arteritis, to compare the obtained results with outcomes reported in published studies of patients with Takayasu arteritis, and to highlight new guidelines for improving the quality of life in these patients.

Case report

The patient is a 41-year-old woman who was diagnosed with Takayasu arteritis at the age of 37. She initially paid a visit to a physician in 2021 with symptoms of dyspnea, tachycardia, and occasional sensations of heart palpitations. Since July 2021, she reported pronounced fatigue, paresthesia in the extremities, and more frequent palpitations and irregular heartbeats. In September of the same year, she noted the inability to measure blood pressure in both upper extremities. By November 2021, she reported rapid onset fatigue and loss of strength in the left arm. From January 2022 onward, she experienced chest pain when exposed to cold air, along with sensations of tingling and discomfort in the legs.

Physical examination revealed normal findings for the heart and lungs, with audible bruits over both carotid arteries. The pulse of the right radial artery was markedly weakened, while the pulse of the left radial artery was not palpable. Pulses were diminished in the left tibial artery and the left popliteal artery. By November, pulses in both radial arteries and both brachial arteries were no longer palpable. Blood pressure was unmeasurable bilaterally.

Laboratory analyses from September 2021 showed elevated erythrocyte sedimentation rate (38 mm/1h) and increased C-reactive protein (CRP) level of 19.7 mg/L.

Color Doppler ultrasonography of the neck blood vessels demonstrates the presence of stenosis of the left common carotid artery (CCA) ranging from 75–90% and of the right CCA ranging from 70–85%. Both CCAs in their proximal segments show nearly uniform wall thickening (the “macaroni sign”) with stenosis of 70%. Bilaterally, there is significant stenosis of the subclavian arteries.

CT angiography of the head and neck reveals the following findings: the right common carotid artery (CCA) shows a reduced lumen throughout its course, up to 60%; the right subclavian artery, distal to the origin of the vertebral artery, demonstrates a reduced lumen of more than 90%; the left CCA is proximally narrowed, with maximal stenosis exceeding 65%; the left internal carotid artery (ICA), distal to the carotid bulb, is narrowed by a mixed plaque up to 50%; the left subclavian artery, beyond the origin of the vertebral artery, shows a reduced lumen of more than 90% over a length greater than 2.5 cm.

PET/CT demonstrated increased accumulation of fluo-

aktivnu osnovnu bolest. Ehokardiografski pregled i EKG pokazali su uredan nalaz.

Pacijentkinji je urađena balon dilatacija i implantacija stenta u desnu arteriju subklaviju.

Terapija je započeta klopidogrelom u dozi od 5 mg tokom godinu dana nakon implantacije stenta, acetilsalicilnom kiselinom u dozi od 100 mg, metotreksatom u dozi od 20 mg do juna 2024, kada je doza smanjena na 15 mg, kao i metilprednizolonom u dozi od 40 mg u trajanju od tri meseca od postavljanja dijagnoze. Nakon toga, doza metilprednizola je postepeno redukovana za po 2 mg mesečno, te je trenutno na dozi održavanja od 2 mg.

Tokom dijagnostike i vaskularne intervencije pacijentkinja je bila na bolovanju od oktobra 2021. do septembra 2022. godine.

U periodu 2023–2024. godine, u tri navrata su urađeni *Color Doppler* i *B-Flow* krvnih sudova vrata.

rodeoxyglucose (FDG) in the walls of both common carotid arteries, more pronounced on the left. Moderately increased FDG uptake was observed in the proximal segments of both subclavian arteries. Mildly increased FDG uptake was present in the wall of the aortic arch and the proximal descending aorta. The findings indicate FDG-active underlying disease. Echocardiographic examination and ECG revealed normal results.

The patient underwent balloon dilatation and stent implantation in the right subclavian artery.

Therapy was initiated with clopidogrel at a dose of 75 mg daily for one year following stent implantation, acetylsalicylic acid at a dose of 100 mg, methotrexate at a dose of 20 mg until June 2024 (when the dose was reduced to 15 mg), as well as methylprednisolone at a dose of 40 mg for three months after diagnosis. Subsequently, the methylprednisolone dose was gradually reduced by 2 mg per month, and the patient is currently maintained on a dose of 2 mg.

During the diagnostic process and vascular intervention, the patient was on medical leave from October 2021 to September 2022.

During the period 2023–2024, Color Doppler and B-Flow examinations of the neck blood vessels were performed on three occasions.

Tabela 1. U periodu 2023–2024. godine, u tri navrata su urađeni *Color Doppler* i *B-Flow* krvnih sudova vrata.
Table 1. During the period 2023–2024, Color Doppler and B-Flow examinations of the neck blood vessels were performed on three occasions

COLOR DOPPLER i B-Flow krvnih sudova vrata COLOR DOPPLER and B-Flow of neck blood vessels	**MART 2023. MARCH 2023.**		**NOVEMBAR 2023. NOVEMBER 2023**		**JUN 2024. JUNE 2024.**	
LEVO-ACC LEFT-ACC	Suženje/ Stenosis	**50–55%**	Suženje/ Stenosis	**55%**	Suženje/ Stenosis	**55%**
	Brzina protoka PSV/ Peak Systolic Velocity (PSV)	**300 cm/s**	Brzina protoka PSV/ Peak Systolic Velocity (PSV)	**270 cm/s**	Brzina protoka PSV/ Peak Systolic Velocity (PSV)	**250%**
DESNO-ACC RIGHT-ACC	Suženje/ Stenosis	**45%**	Suženje/ Stenosis	**40%**	Suženje/ Stenosis	**40%**
	Brzina protoka PSV/ Peak Systolic Velocity (PSV)	**190 cm/s**	Brzina protoka PSV/ Peak Systolic Velocity (PSV)	**190 cm/s**	Brzina protoka PSV/ Peak Systolic Velocity (PSV)	**140 cm/s**
AS	Suženje/ Stenosis	**značajno/ significant**	Suženje/ Stenosis	**stent**	Suženje/ Stenosis	**stent**
	Brzina protoka PSV/ Peak Systolic Velocity (PSV)	**480 cm/s**	Brzina protoka PSV/ Peak Systolic Velocity (PSV)	**350 cm/s**	Brzina protoka PSV/ Peak Systolic Velocity (PSV)	**300 cm/s**

Redovne kontrole reumatologa obavljene su januara i marta 2023. na kojima pacijentkinja navodi da se dobro oseća i da je radno angažovana sa punim radnim vremenom.

Marta 2023. urađena je MSCT angiografija krvnih sudova vrata, a konzilijum za vaskularne bolesti preporučio je nastavak konzervativne terapije.

Na narednim kontrolama obavljenim u julu i oktobru 2023, kao i u januaru i martu 2024. godine, pacijentkinja je bila u dobrom opštem stanju. Laboratorijski nalazi na svim kontrolama bili su u granicama referentnih vrednosti, a obavljena je i kardiološka kontrola u novembru 2023, uključujući EHO srca koji je pokazao uredan nalaz.

Pacijentkinja je do danas na terapiji metilprednizolon u dozi od 2 mg dnevno, metotreksatom od 15 mg nedeljno, folnom kiselinom 5 mg nedeljno, pantoprazolom 10 mg dnevno i Alpha D3 u dozi od 1 mcg dnevno. Navodi da dobro podnosi terapiju, osim dana kada uzima metotreksat kada oseća malaksalost, mučninu, vrtoglavicu i povremeno nagon na povraćanje. Ove tegobe obično traju jedan dan i prolaze spontano ili uz odmor. Navodi da se dobro oseća i uobičajeno nema značajnijih tegoba osim tokom smene godišnjih doba kada se javljaju pojačani umor i malaksalost koje pre obolevanja nije osećala. Od septembra 2022. pacijentkinja je radno angažovana sa punim radnim vremenom, a od početka 2025. angažovana je sa četvorodnevnom radnom nedeljom. U poslednje vreme navodi neznatno ograničenje u obavljanju svakodnevnih aktivnosti, kao što su nošenje namirnica, penjanje uz stepenice i hodanje, dok su aktivnosti poput trčanja ili rekreativnog bavljenja sportom značajno otežane. Takođe navodi da je u poslednje vreme njeno zdravlje imalo značajan negativan uticaj na socijalni život, te da se većinu vremena osećala potišteno, nervozno, iscrpljeno, neraspoloženo i sa smanjenom energijom. Navodi i umerene bolove koji su neznatno uticali na svakodnevne aktivnosti.

Diskusija

Našoj pacijentkinji dijagnoza je postavljena u 37. godini sa kašnjenjem manjim od godinu dana. Blagovremena terapija i uklanjanje vaskularnih komplikacija tokom prve godine lečenja doprinelo je tome da pacijentkinja ima bolji kvalitet života u odnosu na pacijente kojima je dijagnoza postavljena sa većim zakašnjenjem ili koji imaju vaskularne komplikacije. U toku kontrolnih pregleda nije primećeno napredovanje bolesti niti pojave novih vaskularnih komplikacija. Bolest je u remisiji što predstavlja dobar prediktorni faktor. Pacijentkinja navodi da je skraćenje radne nedelje prouzrokovano nuspojavama terapije, a ne prirodom same bolesti. Takođe navodi blago smanjenje fizičke snage usled povremenih bolova, dok je najveći negativan uticaj bolesti primećen u sferi socijalnih odnosa i psihičkog blagostanja. Porodični odnosi nisu narušeni.

Regular rheumatology follow-ups were conducted in January and March 2023, during which the patient reported feeling well and being employed full-time. In March 2023, MSCT angiography of the neck blood vessels was performed, and the vascular disease board recommended continuation of conservative therapy.

At follow-up visits conducted in July and October 2023, as well as in January and March 2024, the patient was in good general condition. Laboratory results at all follow-ups were within reference ranges. A cardiology evaluation was performed in November 2023, including echocardiography, which revealed normal findings.

Currently, the patient remains on therapy with methylprednisolone at a dose of 2 mg daily, methotrexate 15 mg weekly, folic acid 5 mg weekly, pantoprazole 10 mg daily, and Alpha D3 at a dose of 1 mcg daily**.** She reports tolerating the therapy well, except on the days when she takes methotrexate, during which she experiences fatigue, nausea, dizziness, and occasional urge to vomit. These symptoms usually last for one day and resolve spontaneously or with rest. She states that she generally feels well and does not usually experience significant complaints, except during seasonal transitions, when she reports increased fatigue and malaise—symptoms she had not experienced prior to the disease. Since September 2022, the patient has been employed full-time, and since early 2025, she has been working a four-day work week. Recently, she has reported slight limitations in performing everyday activities such as carrying groceries, climbing stairs, and walking, while activities such as running or recreational sports have become considerably more difficult. She also notes that her health has recently had a significant negative impact on her social life, as she has felt mostly downcast, nervous, exhausted, in low spirits, and with reduced energy. She further reports moderate pain, which has had a minor impact on her daily activities.

Discussion

In our patient, the diagnosis was established at the age of 37, with a delay of less than one year. Timely therapy and the management of vascular complications during the first year of treatment contributed to a better quality of life compared to patients whose diagnosis was made with greater delay or who developed vascular complications. During follow-up examinations, no disease progression or new vascular complications were observed. The disease is in remission, which represents a favorable prognostic factor. The patient reports that the shortening of her work week was caused by side effects of therapy rather than the nature of the disease itself. She also notes a mild reduction in physical strength due to occasional pain, while the greatest negative impact of the disease has been observed in the domain of social relationships and psychological well-being. Family relationships have remained unaffected.

TA direktno utiče na svakodnevni život pacijenata. Više od polovine obolelih prijavljuje pogoršanje raspoloženja, sreće i energije. Sistematski pregledi otkrivaju lošiji kvalitet života, češću pojavu depresije i anksioznosti, veći procenat pojave invaliditeta u odnosu na druge hronične bolesti[6]. Uočeno je da je pogoršanje ovih parametara direktno proporcionalno trajanju bolesti, a veća pogoršanja su uočena kod pacijenata sa aktivnom bolešću. Bolji kvalitet života zapažen je kod pacijenata nakon specifičnih tretmana u TA. Velike vaskularne komplikacije, progresivni tok bolesti, kao i starija životna dob ukazuju na lošiju prognozu pacijenata sa Takajašijevim arteritisom. Rani početak komplikacija doprinosi smanjenom preživljavanju, lošijem kvalitetu života i značajnom smanjenju radne sposobnosti. U studiji sprovedenoj 2024. godine (Hajime Yoshifuji) uočeno je da dužina trajanja bolesti značajno utiče na kvalitet života i radnu sposobnost. U poređenju sa muškarcima, žene su mlađe u momentu postavljanja dijagnoze i imaju zbog toga duže trajanje bolesti. Veći procenat žena je imao vaskularne komplikacije koje su zahtevale veći stepen nege. Udeo zaposlenih žena sa Takajašijevim arteritisom je manji nego u opštoj ženskoj populaciji[7]. Zanimljivo je da TA nije imao značajan negativan uticaj na odnose sa supružnikom i članovima porodice. Više pacijenata prijavilo je poboljšanje odnosa sa supružnikom i članovima porodice nego pogoršanje tog odnosa. Uprkos ovim nalazima, TA je imao negativan uticaj na radni život pacijenata, pri čemu gotovo polovina prijavljuje promenu radnih obaveza ili radnog vremena, dok je četvrtina bila prinuđena da napusti posao zbog bolesti[8].

Multicentrična studija objavljena u Francuskoj u periodu 1970–2014. navodi tri parametra kao prognostičke kriterijume kvaliteta života kod pacijenata sa TA, a to su:

- preživljavanje bez događaja (*Event Free Survival - EFS*),
- preživljavanje bez recidiva (*Recidive Free Survival - RFS*),
- i incidencija vaskularnih komplikacija.

Najupečatljiviji zaključci izvedeni iz ove studije su da će 50% pacijenata sa TA imati recidiv i doživeti vaskularnu komplikaciju nakon 10 godina. Muški pol, povišen nivo CRP-a i karotidinija su nezavisno povezani sa relapsom i dva puta većim rizikom od relapsa. Identifikacija pacijenta sa visokim rizikom za vaskularne komplikacije zasniva se na prisustvu ≥ 2 od sledećih faktora: progresivni klinički tok pri postavljanju dijagnoze, zahvaćenost torakalne aorte i retinopatija[9].

Ishodi koje prijavljuju pacijenti (PRO) su sve više prihvaćeni kao jedan od glavnih alata za procenu kvaliteta života, invaliditeta, kao i anksioznosti i depresije. U multicentričnoj studiji sa Oksforda, praćeni su pacijenti sa dijagnozom TA (n = 165) i zdrave kontrolne osobe (n = 109). Korišćen je kratki zdravstveni upitnik od 36 stavki (SF-36). U proceni podskale SF-36, sve stavke su bile statistički niže

TA has a direct impact on patients' everyday lives. More than half of affected individuals report worsening of mood, happiness, and energy. Systematic evaluations reveal poorer quality of life, more frequent occurrence of depression and anxiety, and a higher rate of disability compared to other chronic diseases.[6] It has been observed that deterioration of these parameters is directly proportional to disease duration, with greater impairments noted in patients with active disease. Improved quality of life has been reported in patients following specific treatments for TA. Major vascular complications, progressive disease course, and older age indicate a poorer prognosis in patients with Takayasu arteritis. Early onset of complications contributes to reduced survival, poorer quality of life, and significant decline in work capacity. In a study conducted in 2024 (Hajime Yoshifuji), it was observed that disease duration significantly affects quality of life and work capacity. Compared to men, women are younger at the time of diagnosis and therefore experience longer disease duration. A higher proportion of women had vascular complications requiring greater levels of care. The proportion of employed women with Takayasu arteritis is lower than in the general female population.[7] Interestingly, TA did not have a significant negative impact on relationships with spouses and family members. More patients reported improvement in relationships with spouses and family members than deterioration. Despite these findings, TA had a negative impact on patients' working lives, with nearly half reporting changes in work duties or working hours, while one-quarter were forced to leave their jobs due to the disease.[8]

A multicenter study published in France covering the period 1970–2014 identified three parameters as prognostic criteria for quality of life in patients with TA:

- Event-Free Survival (EFS),
- Recurrence-Free Survival (RFS),
- and the incidence of vascular complications.

The most striking conclusions drawn from this study are that 50% of patients with TA will experience relapse and develop vascular complications within 10 years. Male sex, elevated CRP levels, and carotidynia were independently associated with relapse, conferring a twofold increased risk. Identification of patients at high risk for vascular complications is based on the presence of ≥ 2 of the following factors: progressive clinical course at the time of diagnosis, involvement of the thoracic aorta, and retinopathy.[9]

Patient-reported outcomes (PROs) are increasingly recognized as one of the main tools for assessing quality of life, disability, as well as anxiety and depression. In a multicenter study from Oxford, patients diagnosed with TA (n = 165) and healthy controls (n = 109) were followed. The 36-item Short Form Health Survey (SF-36) was used. In the evaluation of SF-36 subscales, all items were statistically lower in patients with TA. In the mental health assessment, anxiety was found

kod pacijenata sa TA. U mentalnoj proceni, utvrđeno je da je anksioznost češća kod pacijenata sa TA (90 pacijenata; 54,5%) u odnosu na kontrolnu grupu (38 pacijenata; 34,9%). Depresija je takođe bila izraženija kod pacijenata sa TA (70 pacijenata; 66,7%) u odnosu na kontrolnu grupu (35 pacijenata; 33,3%). Većina parametara podgrupe SF-36 bila je niža kod pacijenata sa TA sa aktivnom bolešću. PRO pokazuju da je kod TA narušeno ne samo opšte zdravlje, već i fizičko i socijalno funkcionisanje sa ograničenjima fizičkih uloga i parametrima mentalnog zdravlja. Rezultati studije, posebno kod aktivne bolesti, sugerišu da PRO kao što je SF-36 mogu biti ključni domeni procene bolesti kod TA[10, 11].

Zaključak

Takajašijev arteritis je retka bolest sa značajnim posledicama po kvalitet života pacijenata. Fizičko i mentalno zdravlje kod ovih pacijenata je lošije u poređenju sa ostalim hroničnim bolestima. Bolji kvalitet života registrovan je kod mlađih pacijenata, dok je lošiji kod onih koji uzimaju imunomodulatorne lekove. Takođe, uočeno je da je jedini faktor koji pozitivno utiče na tok bolesti i kvalitet života obolelih od Takajašijevog arteritisa remisija bolesti. Stoga je neophodno uložiti sve napore kako bi se ovaj cilj postigao.

to be more frequent among patients with TA (90 patients; 54.5%) compared to the control group (38 patients; 34.9%). Depression was also more pronounced in patients with TA (70 patients; 66.7%) compared to the control group (35 patients; 33.3%). Most SF-36 subscale parameters were lower in patients with active disease. PROs demonstrate that in TA not only general health is impaired, but also physical and social functioning, with limitations in physical roles and mental health parameters. The results of the study, particularly in active disease, suggest that PROs such as SF-36 may represent key domains for disease assessment in TA.[10 11]

Conclusion

Takayasu arteritis is a rare disease with significant consequences for patients' quality of life. Physical and mental health in these patients is poorer compared to other chronic diseases. Better quality of life has been recorded in younger patients, while it is worse in those receiving immunomodulatory drugs. It has also been observed that the only factor positively influencing disease course and quality of life in patients with Takayasu arteritis is disease remission. Therefore, every effort must be made to achieve this goal.

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