

EFEKTI KEGELOVIH VJEŽBI KOD URINARNE INKONTINENCIJE ŽENA

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Sažetak: Cilj istraživanja je da se dokaže djelotvornost programa Kegellovih vježbi na liječenje blage do umjerene stresne urinarne inkontinencije kod žena. Istraživanje je obuhvatilo 43 pacijentice, liječene u konsultativno-specijalističkoj ambulanti Javne zdravstvene ustanove Dom zdravlja Laktaši. Pacijenticama su uzeti: opšti podaci, indeks tjelesne mase, ginekološka anamneza, socijalna anamneza, svim pacijenticama je urađen ginekološki pregled na dan javljanja u konsultativno-specijalističku ambulantu, procijenjen defekt prednje stijenke rodnice prema POP-Q klasifikaciji. Bolji uspjeh u liječenju inkontinencije smo postigli kod žena u pre i perimenopauzi, u odnosu na žene u postmenopauzi. Kod 14 (35%) pacijentica nismo dobili povlačenje tegoba, izazvane inkontinencijom. Takođe, kod 10 (25%) pacijentica koje su rađale krupniju djecu program Kegellovih vježbi nije dao rezultate. Kod 30 (75%) pacijentica koje su imale visoku, višu ili srednju stručnu spremu nakon odrađenih Kegellovih vježbi, smo dobili prestanak inkontinencije. Kod 10 (25%) pacijentica koje su bile domaćice i obavljale teške fizičke poslove nije došlo do oporavka od inkontinencije.

Na osnovu dobijenih rezultata, zaključili smo da su Kegellove vježbe efikasan način liječenja blage i srednje teške stres urinarne inkontinencije, ali da na efikasnost utiču brojni faktori, kao što su starosna dob žena, tjelesna težina, obrazovanje, broj poroda, težak fizički rad.

Ključne riječi: Kegellove vježbe, urinarne inkontinencija.

Uvod

International Continence Society (ICS) definiše inkontinenciju urina kao stanje nevoljnog oticanja mokraće, koje se može objektivno dokazati, a bolesnik je socijalni i higijenski problem (Abrams, Blaivas, Stanton i Andersen, 1998). Prevalencija poremećaja urinarne inkontinencije raste sa dobi, kod mlađih odraslih žena

URINARY INCONTINENCE AND THE EFFECTS OF KEGEL EXERCISES FOR PELVIC MUSCLES

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Abstract: The aim of research was to prove the effectiveness of programs Kegell exercises in treatment of mild to moderate stress urinary incontinence in women. The study included 43 patients treated in specialist outpatient consultative Public Health Institution Health Center Laktaši. The patients were taken: general data, body mass index, gynecological history, social history, all patients underwent gynecological examination on the day of occurrence in consultative specialist clinic, estimated defect of the front wall vagina to POP-Q classification. Better success in the treatment of urinary incontinence in women were achieved in the pre and perimenopausal stages in comparison to postmenopausal stage. In 14 (35%) patients did not get withdrawal symptoms caused by incontinence. Also, in 10 (25%) of women who gave birth to bigger babies the Kegell exercise program failed. In 30 (75%) patients who had high, college or high school education, after the Kegell exercises, we have got the cessation of incontinence. In 10 (25%) patients who were housewives and performed heavy physical work the recovery from incontinence did not occur. Based on obtained results, we concluded that the Kegell exercises effectively improved the condition with patients during mild to moderate stress urinary incontinence treatment, however the efficiency was influenced by numerous factors, such as age of the women, body weight, parity, number of births, heavy physical work, etc.

Keywords: Kegell exercises, urinary incontinence.

INTRODUCTION

The International Continence Society (ICS) defines urinary incontinence as a condition of involuntary leakage of urine, which can be objectively demonstrated, and presents the social and hygienic problem for the patient (Abrams, Blaivas, Stanton & Andersen, 1998). The prevalence of urinary incontinence increases with age, with

iznosi od 20-30%, u srednjoj dobi od 30-40%, a u starijoj dobi zahvata gotovo polovinu žena, čak 30-50% (DeLancey, 1992; Hunskaar, Burgio, Diokno et al 2002).

Uzroci inkontinencije urina su: urođena ili razvojna slabost veziva – to je najvažniji momenat u nastajanju descenzusa i prolapsa, što se posebno može primjetiti kao sklonost ovih poremećaja u nekim porodicama; kongenitalni prolaps je udružen sa spinom bifidom; ozljede koje nastaju pri porođaju. Naročito je izražena u slučaju produženog drugog porođajnog doba. Mišićno-vezivna struktura karlice pri tome je duže vrijeme rastegnuta, što dovodi do poremećaja krvotoka i ishemije sa nekrozom, ali i do pucanja mišića (m. levator ani) i naročito vezivnih karličnih fascija (pubocervikalnih i rektovaginalnih) koje su sastavljene od kolagenih i elastičnih vlakana i nisu sposobne izdržati preveliko rastezanje kojima ih izlaže produžen porođaj, te dolazi i do ozljede n. pudendusa. Prolaps materice i rodnice vrlo se rijetko nalazi kod žena koje su rađale carskim rezom (Petros i Ulmsten, 1990; Price, Dawood, Jaekson, 2010, Mant, Paintar, Vessey, 1997); u perimenopauzi, a naročito u postmenopauzi povećava se broj žena sa statičkom inkontinencijom. Popuštanje funkcije jajnika i pad vrijednosti polnih hormona, dodatno slabe mišićno-vezivne strukture karlice, nakon čega je i manji poremećaj dovoljan da spuštanje karličnih organa postane uočljivo. Gubitkom estrogena dolazi do atrofije sluznice, slabije prokrvljenosti submukuznog venskog spleta, te slabijeg tonusa glatkih mišića koji djeluju kao sfinkterski mehanizam uretre. Isto tako slabi prokrvljenost svih struktura u maloj karlici, što izaziva atrofiju organa i njihovo lakše oštećenje; slabost karlične muskulature, vezivnog tkiva i konstitucije bolesnika, operacija u području male karlice; povišenja intraabdominalnog pritiska. Najčešće je to posljedica teških fizičkih poslova, dizanja preteškog tereta, ali i hroničnih opstruktivnih bolesti disajnih organa sa čestim kašljem. Poremećaj probave sa otežanim pražnjenjem crijeva, također dovodi do učestalog i trajnog povišenja intraabdominalnog pritiska.

Inkontinenciju možemo podijeliti na više načina. Prema nastanku se dijele na urođene i stečene, prema uzroku na neurogene i neneurogene, prema mjestu na uretralne i ekstrauretralne, a prema načinu na apsolutne i relativne. Prema ICS (International Continence Society) statička inkontinencija mokraće definiše se kao neželjeno djelovanje mokraće kroz uretru istovremeno sa porastom intraabdominalnog pritiska, zbog kojeg intravezikularni pritisak nadvladava pritisak u uretri, uz odsutnu aktiv-

younger adult women is between 20-30%, in middle age from 30-40%, and in older age makes almost half of the women, even 30-50% (DeLancey, 1992; Hunskaar, Burgio, Diokno et al 2002).

The causes of urinary incontinence are: congenital or developmental weaknesses - that's the most important moment in the emergence of descent and prolapse, which may particularly be noticed as the tendency of these disorders run in families; Congenital prolapse is associated with spina bifida; injuries that occur during childbirth. It is particularly pronounced in the case of a prolonged second stage of labor. Musculo-bonding properties of the pelvis at the same time a longer time is stretched, which leads to ischemia and circulatory disorders with necrosis, as well as to cracking muscle (m. levator ani) as a binder and in particular pelvic fascia (pubocervical and rectovaginal) which are composed of collagen and elastic fiber and are not able to withstand the over-stretching which exposes them to the prolonged labor, and leads to the injury n. pudendus. Prolapse of the uterus and vagina are very rarely found in women who gave birth by caesarean section (Petros i Ulmsten, 1990; Price, Dawood, Jaekson, 2010, Mant, Paintar, Vessey, 1997); menopausal, and particularly postmenopausal women increases the number of the static incontinence. Give ovarian function and decrease the value of sex hormones, in addition to poor muscle-connective structure of the pelvis, followed by a smaller disorder sufficient to lower the pelvic organs become visible. The loss of estrogen leads to mucosal atrophy, poor blood circulation submucosal venous plexus, and the weaker tone of smooth muscles that act as urethral sphincter mechanism. It also weakens the blood supply of all structures in the pelvis, which causes atrophy of organs and damage them easier; the weakness of the pelvic muscles, connective tissue and constitution of the patient, the operations in the pelvis; increase intra-abdominal pressure. It is often the result of heavy physical work, heavy weight lifting, and chronic obstructive respiratory diseases with frequent cough. Indigestion with difficult bowel movement also leads to frequent and continuing increases of intra-abdominal pressure.

Incontinence can be categorized in several ways. According to the origin it can be divided into congenital and acquired, according to the cause of neurogenic and not neurogenic, the place of the urethral and extraurethral, and the manner in absolute and relative. According to ICS (International Continence Society) stress urinary incontinence is defined as involuntary urine leak through the urethra simultaneously with the increase in intra-abdominal pressure, for which intravesical pressure over-

nost detrusora (Shafik A i Shafik IA, 2003). To je najčešći oblik inkontinencije, kod kojeg se već anamnezom može sa velikom vjerovatnošću postaviti dijagnoza, jer bolesnice navode nekontrolisano mokrenje prilikom kihanja, kašljanja, trčanja i sličnih aktivnosti. Jačina stresne inkontinencije je klasifikovana od strane Stameya: 1) grade I: puštanje urina sa naglim porastom abdominalnog pritiska: kašljanje, kihanje ili smijanje 2) grade II: gubitak urina sa manjim stepenom stresa npr. hodanje ili stajanje 3) grade III: gubitak urina bez ikakve veze sa tjelesnom aktivnošću ili položajem npr. dok leži u krevetu (Orešković, 2003). Inkontinencija ne utiče samo na bolesnike nego i na njihove porodice, što predstavlja značajan medicinski, društveni i ekonomski problem Rortveist, Hannestad, Daltveit i Hunskaar (2001).

Kegelove vježbe su vježbe za jačanje mišića dna karlice i efikasne su u liječenju umjerene statičke inkontinencije, sa minimalnim anatomskim promjenama rodniice ili bez njih (Price, Dawood i Jaekson, 2010). Ovu metodu kao terapiju statičke urinarne inkontinencije prvi je osmislio Arnold Kegel 1950.godine(Kegel, 1951). Vježbe se takođe mogu primjeniti profilaktički, u postpartalnom periodu ili nakon operativnih zahvata u maloj karlici (Shafik A i Shafik IA, 2003). Po preporuci Cochrane Incontinence Group one bi trebale biti prva linija konzervativnog liječenja statičke inkontinencije (Hay-Smith, Berghmans, Hendriks et al, 2001). Za uspjeh Kegelovih vježbi od presudne važnosti je da se rade ispravno, redovno i dovoljno dugo od 3 do 4 puta dnevno, od 8 do 10 kontrakcija, zadržanih 3 sekunde. Poboljšanje se očekuje nakon razdoblja od 20 do 60 dana. Iako vježbe ne mogu anatomski korigovati uretralnu hiperomobilnost, pomažu u liječenju statičke inkontinencije, jačanjem periuretralne muskulature i poboljšanjem njenog odgovora na porast intraabdominalnog pritiska (Park Seong-Hi i Chang-Bum, 2014)

Osnovni cilj istraživanje je bio dokazivanje djelotvornosti programa Kegelovih vježbi na liječenje blage do umjerene stresne urinarne inkontinencije kod žena.

MATERIJAL I METODE RADA

Istraživanje je obuhvatilo 43 pacijentice liječene u konsultativno-specijalističkoj ambulanti Javne zdravstvene ustanove Dom zdravlja Laktaši. Istraživanje je sprovedeno od decembra 2014 do marta 2015 godine. U istraživanje su uključene pacijentice sa blagom i srednje teškom stres inkontinencijom. Pacijentice sa genitalnim descenzusom ili prolapsom većim od 2 stepena nisu uključene u istraživanje. Kontrolni pregled je obavljen nakon dva mjeseca.

comes the pressure in the urethra, with an absent detrusor activity (Shafik A i Shafik IA, 2003). It is the most common form of incontinence, in which the history plays relevant role. Patients referred uncontrolled urination while sneezing, coughing, running and other activities.

The severity of stress incontinence is classified by Stamey: 1) Grade I: the release of urine with a rapid increase in abdominal pressure: coughing, sneezing or laughing; 2) Grade II: loss of urine with a lower degree of stress for example walking or standing; 3) Grade III: Loss of urine without any connection to physical activity or position, for example while lying in bed(Oreskovic, 2003). Incontinence affects not only patients but also their families, which represent a significant medical, social and economic problem-Rortveist, Hannestad, Daltveit & Hunskaar (2001).

Kegel exercises are exercises to strengthen the pelvic floor muscles and are effective in the treatment of moderate static incontinence, with minimal anatomical changes of the vagina or without them (Price, Dawood & Jaekson, 2010). This method as static treatment of urinary incontinence was first coined by Arnold Kegel in 1950 (Kegel, 1951). Exercises can also be applied prophylactically, in the postpartum period or after surgery in the pelvis (Shafik A& Shafik IA, 2003). As recommended by the Cochrane Incontinence Group they should be the first line of conservative treatment of incontinence static (Hay-Smith, Berghmans, Hendriks et al, 2001).The success of Kegel exercises depends on them being done properly, regularly and long enough i.e. from 3 to 4 times a day, from 8 to 10 contractions, retained for 3 seconds. The improvement is expected after a period of 20 to 60 days. Although exercise can not anatomically correct urethral hypermobility, it can help the treatment of static incontinence, periurethral muscle strengthening and improve the response to an increase of the intra-abdominal pressure (Park Seong-Hi i Chang-Bum, 2014)

Research was done with the aim to prove the effectiveness of programs Kegel exercises in treatment of mild to moderate stress urinary incontinence in women.

MATERIALS AND METHODS

The study included 43 patients treated in specialist outpatient consultative Public Health Institution Health Center Laktaši. The survey was conducted from December 2014 to March 2015. The study included patients with mild and moderate stress incontinence. Patients with genital descent or prolapse greater than 2 degrees are not included in the study. An inspection was carried out after two months.

Pacijenticama su uzeti: opšti podaci (starosna dob, tjelesna težina, visina); indeks tjelesne mase (izračunali smo tako što se tjelesna masa izražena u kilogramima podijeli kvadriranom tjelesnom visinom izraženom u kvadratnim metrima tjelesne mase (kg)/tjelesna visina² (m²). Vrijednosti indeksa tjelesne mase (od 18,5-24,9 kg/m²- normalna; od 25-29,9 kg/m² –suvišna tjelesne težina i indeks tjelesne mase od 30,3-34,0 kg/m²- gojazni I kategorija); ginekološka anamneza (menstrualni ciklus, datum zadnje menstruacije, broj poroda, način porođaja, težina djece na porodu, operativni zahvat na genitalnim organima); socijalna anamneza (stručna sprema, obavljanje teških fizičkih poslova); svim pacijenticama je urađen ginekološki pregled na dan javljanja u konsultativno-specijalističku ambulantu i procijenjen defekt prednje stijenke rodnice prema POP-Q klasifikaciji.

REZULTATI

Nakon urađenog ginekološkog pregleda, pažljivo uzete anamneze i fizikalnog pregleda, procijenili smo urinarnu inkontinenciju kod žena. Svim pacijenticama smo preporučili program Kegellovih vježbi u pisanom i slikanom obliku u trajanju od dva mjeseca.

Od 40 pacijentica, 1 (2,5%) je bila starosne dobi između 27 i 37 godina; 25 (62%) ih je bilo između 38 i 45 godina i 14 (35%) pacijentica je bilo između 46 i 55 godina. Sa povećanim indeksom tjelesne mase je bilo 15 (37%) pacijentica, a njih 25 (62%) su imale normalan indeks tjelesne mase. Prema hormonskom statusu u premenopauzi je bila 1 (2,5%) pacijentica, u perimenopauzi je bilo 25 (62%), a u postmenopauzi je bilo 14 (35%) pacijentica. Svih 40 pacijentica su imale više poroda i rađale su vaginalnim putem. Krupniju djecu (oko 4000 gr) je navelo 10 (25%) pacijentica. Operativne zahvate na genitalnim organima su imale 2 (50%) pacijentice. Sa visokom i višom stručnom spremom je bilo 5 (12%) pacijentica, sa srednjom 25 (62%) pacijentica i 10 (25%) su bile domaćice. Teže fizičke poslove je obavljalo 10 (25%) pacijentica.

Nakon odrađenog programa Kegellovih vježbi dobili smo sljedeće rezultate: kod 1 (2,5%) pacijentice u postpartalnom periodu smo nakon odrađenih Kegellovih vježbi u trajanju od dva mjeseca, dobili prestanak inkontinencije. Kod pacijentica između 38 i 45 godine, a bilo ih je ukupno 25 (62%) nakon odrađenog programa vježbi smo dobili: kod 15 (37%) pacijentica je došlo do povlačenja simptoma inkontinencije, kod 10 (25%) su se zadržale iste tegobe. Kod pacijentica između 46 i 55 godine, ukupno njih 14 (35%) nismo dobili poboljšanje ni nakon programa Kegellovih vježbi.

The patients were taken into consideration given: their general data (age, weight, height); body mass index (we calculated dividing the body weight in kilograms divided by the squared body height in meters squared of body weight (kg) / body height² (m²). The values of body mass index (from 18.5 to 24.9 kg / m² are normal, from 25 to 29.9 kg / m² -superfluous body weight and body mass index of 30.3 to 34.0 kg / m² are fat); gynecological history (menstrual cycle, date of last menstrual period, the number of delivery, mode of delivery, weight of children at birth, surgery on the genitalia); social history (degree, the performance of hard labor); all patients who underwent gynecological examination on the day of reporting to the consultative specialist clinics and estimated defect anterior wall of the vagina towards the POP-Q classification;

RESULTS

After the gynecological examination, careful history and physical examination, we assessed the urinary incontinence in women. To all the patients we recommended a Kegel exercises program.

Out of 40 patients 1 (2.5%) aged between 27 and 37 years; 25 (62%) were between 38 and 45 years old and 14 (35%) of the patients were between 46 and 55 years old. The increased body mass index was found in 15 (37%) patients, and in 25 (62%) we found the normal body mass index. According to the hormonal status there were 1 (2.5%) of patients pre-menopausal, in perimenopausal 25 (62%) and 14 (35%) patients were postmenopausal women. All 40 patients had multiple births and gave birth vaginally. Large children (4,000 g) were reported in 10 (25%) patients. Operative interventions on the genitalia had 2 (50%) patients. There were 5 (12%) patients with university or college degree, with a mean of 25 (62%) patients and 10 (25%) were housewives. Harder physical work is performed by 10 (25%) patients.

After completing the program of Kegel exercises we got the following results: in 1 (2.5%) patients in the postpartum period doing the Kegel exercises for a period of two months we had a cessation of incontinence. Patients between 38 and 45 years of age and there were a total of 25 (62%) of them who after a period of exercise program got the results: in 15 (37%) patients there were the withdrawal symptoms of incontinence, while 10 (25%) patients retained the same problem. Patients between 46 and 55 years of age, 14 (35%) of them, did not feel improvement even after the program of Kegel exercises.

Tabela 1. *Efekat Kegellovih vježbi na urinarnu inkontinenciju u zavisnosti od starosne dobi učesnica*

Parametri / Parameters	Povlačenje simptoma / Withdrawal symptoms	Bez povlačenja simptoma / No withdrawal symptoms	Ukupno / Total
Premenopauza (od 27 do 37 godina) / Premenopausal (age 27 to 37)	1 (2.5%)	0	1 (2.5%)
Perimenopauza (od 38 do 45 godina) / Perimenopausal (age 38 to 45)	15 (37%)	10 (25%)	25 (62%)
Postmenopauza (od 46 do 55 godina) / Postmenopausal (age 46 to 55)	0	14 (35%)	14 (35%)

Kod 15 (37%) pacijentica koje su imale povećan indeks tjelesne mase, program Kegellovih vježbi nije doveo do poboljšanja tegoba, dok smo kod pacijentica sa normalnim indeksom tjelesne mase postigli izlječenje.

Tabela 2. *Efekat Kegellovih vježbi na urinarnu inkontinenciju u zavisnosti od BMI učesnica*

Parametri / Parameters	Povlačenje simptoma / Withdrawal symptoms	Bez povlačenja simptoma / No withdrawal symptoms	Ukupno / Total
Normalan BMI / A normal BMI	25 (62%)	0	25 (62%)
Povišen BMI / Elevated BMI	0	15 (37%)	15 (37%)

Kod 2 (0,5%) pacijentice koje su imale operativne zahvate na genitalnim organima došlo je do izlječenja. Bolji uspjeh u liječenju inkontinencije smo postigli kod žena u pre i perimenopauzi, u odnosu na žene u postmenopauzi. Kod 14 (35%) pacijentica nismo dobili povlačenje tegoba, izazvane inkontinencijom. Takođe, kod 10 (25%) pacijentica koje su rađale krupniju djecu program Kegellovih vježbi nije dao rezultate.

Kod 30 (75%) pacijentica koje su imale visoku, višu ili srednju stručnu spremu nakon odrađenih Kegellovih vježbi smo dobili prestanak inkontinencije. Kod 10 (25%) pacijentica koje su bile domaćice i obavljale teške fizičke poslove nije došlo do oporavka od inkontinencije.

Tabela 3. *Efekat Kegellovih vježbi na urinarnu inkontinenciju u zavisnosti od obrazovanja učesnica.*

Parametri / Parameters	Povlačenje simptoma / Withdrawal symptoms	Bez povlačenja simptoma / No withdrawal symptoms	Ukupno / Total
VSS / University Degree holders	5 (12%)	0	5 (12%)
SSS / High School holders	25 (62%)	0	25 (62%)
Domaćice / Housewives	0	10 (25%)	10 (25%)

DISKUSIJA

Prema dostupnim podacima na svjetskom nivou do 8% stanovništva pati od povremene ili stalne inkontinencije. Kod svih kontinentnih žena sa normalnom uretrovezikularnom anatomijom, pritisak u proksimalnoj uretri

Table 1. *The effect of Kegel exercises on urinary incontinence, depending on the age of participants*

In 15 (37%) patients who had significantly higher body mass index, Kegel exercise program did not help the problems as it was the case in patients with normal BMI.

Table 2. *The effect of Kegel exercises on urinary incontinence, depending on the BMI of participants*

In 2 (0.5%) patients who had surgeries of the genital organs, there was an improvement noted. Better results in the treatment of incontinence in women have been achieved in the pre and perimenopause, compared to the postmenopausal women. 14 (35%) patients did not get withdrawal problems caused by incontinence. Also, in 10 (25%) patients who gave birth to the larger children, the program of Kegel exercises failed. In 30 (75%) patients who had high, higher or secondary education doing the Kegel exercises we had the cessation of incontinence. In 10 (25%) of patients who were housewives and perform heavy physical labor no recovery from incontinence happened.

Table 3. *The effect of Kegel exercises on urinary incontinence, depending on the education of participants.*

DISCUSSION

According to the available data at the global level up to 8% of the population suffers from occasional or permanent incontinence. In all of continentwomen with a normal urethra-swine anatomy, the pressure in the proximal urethra is

je nepromjenljiv i uvijek je jednak ili nadmašuje pritisak u mjehuru. Iznenadno povećanje pritiska se prenosi na mjehur i proksimalne 2/3 uretre, održavajući pritisak u uretri jednakim ili većim od pritiska u bešici. Kod pacijentica sa urinarnom stress inkontinencijom pritisak u uretri u miru teži da bude niži, mada je još uvijek veći od pritiska u mjehuru. Kašalj pokreće uobičajenu razliku pritiska između uretre i mjehura. Pritisak u mjehuru postaje jednak ili premašuje pritisak u uretri pa se javlja curenje urina. Očigledno je da proksimalno 2/3 normalne uretre leži u abdomenu. Otuda iznenadno podizanje pritiska u abdomenu proizvodi prenošenje pritiska u proksimalne 2/3 uretre kao i u mjehuru. Kod pacijentica sa urinarnom stress inkontinencijom slabo podržana proksimalna uretra je pomjerena i leži van abdominalnog polja sila i ne može da se odupre povećanju pritiska u bešici. Estrogen održava submukozno tkivo širokim i snažnim. Nedostatak estrogena poslije menopauze ili obostrana adnexektomia (odstranjenje jajnika i jajovoda) može da smanji debljinu ovog sunderastog sloja tkiva. Stoga je statička inkontinencija čest problem koji se javlja u 50 % žena u peri i postmenopauzi (Patel, Amrute i Badlani, 2006; Gabriel, Denschlag, Gobel, et al. 2005). Žene koje su imale dva ili više poroda su u većem riziku za urinarnu inkontinenciju, dok je relativni rizik za žene koje su se porodile carskim rezom (Rortveist, Daltveit, Hannestad i Hunskaar, 2003). Takođe, je bitan i broj poroda, kod višerotki se češće javljaju problemi stress inkontinencije (Shafik A i Shafik IA, 2003). I u našem istraživanju svih 40 pacijentica su imale veći problem sa inkontinencijom jer su imale više poroda i rađale vaginalnim putem. Keglove vježbe jačaju mišiće dna karlice koje podržavaju matericu, tanko crijevo i rektum. One mogu unaprijediti djelovanje neuromuskularnih veza i refleksa u regiji mjehura i uretre (Sinciar i Ramsay, 2011). U našem istraživanju Keglove vježbe su bile efikasne kod pacijentica mlađe životne dobi i kod pacijentica u potpartalnom periodu.

ZAKLJUČAK

Disfunkcija mokraćnog mjehura predstavlja globalan problem koji osim funkcionalnog predstavlja problem odnosa sa partnerom, emocionalni i psihički problem, stoga ga treba staviti u prvi plan i uz kvalitetnu terapiju osigurati adekvatno liječenje.

Na osnovu dobijenih rezultata, zaključili smo da su Keglove vježbe efikasan način liječenja blage i srednje teške stress urinarne inkontinencije, ali da na efikasnost utiču brojni faktori, kao što su starosna dob žena, tjelesna težina, obrazovanje, broj poroda, težak fizički rad.

unchanged and always equals or exceeds the pressure in the bladder. A sudden increase in pressure is transferred to the bladder and proximal urethra 2/3, maintaining the pressure in the urethra equal to or greater than the pressure in the bladder. Patients with urinary stress incontinence pressure in the urethra at rest tends to be lower, although still higher than the pressure in the bladder. Cough runs normal pressure difference between the urethra and bladder. The pressure of the bubble becomes equal to or exceeds the pressure in the urethra, therefore causing the leakage of urin. Obviously it is 2/3 that of the normal proximal urethra is located in the abdomen. Hence the sudden raising of pressure in the abdomen produces conveying pressure in the proximal 2/3 of the urethra and bladder as well. Patients with urinary stress incontinence poorly supported proximal urethra is shifted and lies outside the abdominal force fields and could not resist the increasing pressure in the bladder. Estrogen keeps submucosal tissue wide and strong. The lack of estrogen after menopause or bilateral adnexektomia (removal of the ovaries and fallopian tubes) can reduce the thickness of this layer of spongy tissue. Therefore, the static incontinence is a common problem that occurs in 50% of women in the peri and postmenopausal phase (Patel, Amrute i Badlani, 2006; Gabriel, Denschlag, Gobel, et al. 2005). Women who have had two or more births are at higher risk for urinary incontinence, while the risk is relative for women who gave birth by Caesarean section. (Rortveist, Daltveit, Hannestad & Hunskaar, 2003). Also, a significant number of births causes that mothers are more likely to have problems of stress incontinence (Shafik A & Shafik IA, 2003). In our study, all 40 patients had a big problem with incontinence because they had worked hard and gave birth vaginally. Keglove exercises strengthen the pelvic floor muscles that support the uterus, small intestine and rectum. One can enhance the effect of neuromuscular connections and reflexes in the region of the bladder and urethra (Sinciar & Ramsay, 2011). In our study Keglove exercises were effective in younger patients and in patients in postpartum period.

CONCLUSION

The dysfunction of the bladder represents a global problem that represents a problem for functional relationship with a partner, emotional and psychological problem, so it should be placed in the right place with intention to reach quality therapy to ensure adequate treatment.

Based upon these results, we concluded that Keglove exercises were the effective way of treating mild and moderate stress urinary incontinence, but the efficiency was influenced by numerous factors, such as age women, body weight, education, number of births, heavy physical work.

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Autori pridonijeli jednako.

Authorship statement
The authors have contributed equally.

Konflikt interesa
Mi izjavljujemo da nemamo konflikt interesa.

Financial disclosure
We declare that we have no conflicts of interest.

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Primljen: 14. april 2015. / Received: April 17, 2015
Prihvaćen: 18. maj 2015. / Accepted: May 18, 2015