KARCINOM VULVE – PRIKAZ PRIMERA

VULVAR CANCER – A CASE REPORT

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Izvleček

Izhodišča *Maligne spremembe zunanjega spolovila pogosto nastanejo iz predmalignih intraepitelijskih neoplazij vulve (VIN). Pojavljajo se redko (3–4 % vseh rakavih bolezni ženskih spolnih organov) in predvsem v pomenopavzi. Povezane so z okužbo s humanimi papiloma virusi. Če bolezenske spremembe na zunanjem spolovilu odkrijemo dovolj zgodaj in jih ustrezno zdravimo, je izid ugoden.*

Prikaz primera *Predstavljamo primer 60-letne mnogorodnice v pomenopvzi z recidivom karcinoma vulve. Maja 1995 je bil pri njej ugotovljen VIN III po biopsiji bolezenskih sprememb na vulvi. Februarja 2006 je bila pregledana na Onkološkem Inštitutu zaradi obsežne spremembe, ki je zajemala področje celotnega zunanjega spolovila in segala od klitorisa pa vse do anusa. 07.03.2006 je bila narejena vulvektomija s širokim varnostnim robom in limfadenektomija desno. Histološki izvid je pokazal dobro diferenciran invazivni skvamozni karcinom (FIGO II, gradus I). Sledilo je pooperativno obsevanje. Februarja 2007 so se ponovno pojavile sumljive kožne spremembe na področju zunanjega spolovila, odvzeti bris pa je bil negativen. Decembra 2007 je bila postavljena histološka diagnoza in sicer recidivni skvamozni karcinom. 07.10.2008 je bila sprejeta na Klinični oddelek za ginekologijo, Ginekološka klinika, UKC Ljubljana. CT izvid trebuha je pokazal zelo razširjen karcinom vulve, po videzu T4. Sumljiva je bila bezgavka predsakralno, prav tako tudi levo ingvinalno. Razsoj karcinoma v jetrih ni bil potrjen. 28.10.2008 je bila pri njej napravljena totalna Brunschwigova operacija (kompletna pelvična eksenteracija s pelvičnimi bezgavkami in obsežno radikalno vulvektomijo z resekcijo obeh ramusov ossis pubis), anus praeter in transpozicija kožno-mišičnega režnja m.rectus abd. Pri posegu, ki je trajal 9 ur in med katerim je bila izguba krvi 6 litrov, so poleg ginekologov sodelovali tudi urolog, plastični kirurg ter onkološki kirurg. Histološki izvid 27 × 24 cm velikega preparata je bil planocelularni karcinom, zmerno diferenciran in odstranjen v zdravem. Po posegu je sledila dolgotrajna pooperativna psihofizična rehabilitacija, med katero je poleg okužb rane z različnimi mikrobi prišlo tudi do sepse s Klebsiello Pneumoniae ESBL pozitivno, kasneje pa tudi do glivično povzročene sepse. Rezultat tega je bilo dolgotrajno zdravljenje s sistemskimi antibiotiki in antimikotiki. 02.02.2009 je bila narejena nekrektomija ter ponovna plastika na sakralnem predelu. Med 143-dnevno hospitalizacijo jo je zaradi depresivnega razpoloženja redno obravnavala klinična psihologinja. Ob odpustu je bila bolnica v dobri psihofizični kondiciji. Odvajala je redno, za nego anusa praeterja je skrbela sama. Rekonstrukcija okvare je bila estetsko dobra in funkcionalna. Na kontrolnem pregledu čez 3 mesece je bila dobrega psihofizičnega počutja. Ponovno se je vrnila na delovno mesto.*

Zaključki *S tem primerom želimo opozoriti, da je potrebno redno spremljanje bolnic tudi po zaključenem zdravljenju. Če se ponovno pojavijo sumljive spremembe, je nujna obravnava pri ustreznih in usposobljenih strokovnjakih.*

Ključne besede *karcinom vulve; recidiv; pooperativni nadzor*

Abstract

Background *Malignant vulvar lesions arise from premalignant vulvar intraepithelial neoplasm (VIN) and occur only rarely (3–4 % of all malignancies of the female genital organs), especially in the menopause. They are associated with human papillomavirus infection. If the change is found sufficiently early and if it is properly treated, the prognosis is favourable.*

Methods and patients *We present a case of a 60-year-old multiparous postmenopausal woman with recurrence of the vulvar cancer. In May 1995 vulvar biopsy revealed VIN III. In February 2006 she was examined at the Oncology Institute because of expansive lesions which covered the entire area of external genitals from clitoris to the anus. On 7th March, 2006 vulvectomy with broad safety margins and right-sided lymphadenectomy were made. Histological diagnosis revealed a well-differentiated invasive squamous cell carcinoma (FIGO II, grade I); postoperative radiotherapy followed. In February 2007, suspicious lesions reoccurred in the external genital area, the smear was negative. In December 2007 histological diagnosis of recurrent squamous cancer was made. On 7th October, 2008 the patient was admitted to the Department of Gynecology, University Medical Centre, Ljubljana. Abdominal computed tomography showed a widespread vulvar cancer, T4 in appearance, suspicious lymph nodes in the pre-sacral area and suspicious left inguinal lymph node. Metastases to the liver were not confirmed. On 28th October, 2008 total Brunschwig operation was performed (pelvic exenteration of the bladder, uterus, pelvic lymph nodes, rectum and radical vulvectomy with resection of both ramus ossis pubis), anus praeter and transposition of skin-muscle flap (m. rectus abdominis). The interdisciplinary operation, which lasted 9 hours and blood loss was 6 litres, involved gynaecologists, a urologist, a plastic surgeon, and an oncology surgeon. The histological diagnosis of a 27 × 24 cm large preparation was a moderately differentiated planocellular carcinoma, which was totally removed. The operation was followed by prolonged post-operative physical and mental rehabilitation, during which beside wound infections with various microbes also Klebsiella pneumoniae ESBL sepsis, and later Candida sp. caused sepsis developed. This led to prescription of a long lasting treatment with systemic antibiotics and antimycotics. On 2nd February, 2009 re-necrectomy and plastic surgery of the sacral region were made. During a 143-day hospitalization, the patient's depression was regularly managed by clinical psychologist. On discharge from hospital she was in good physical and mental condition, did not have problems with digestion, took care of the anus praeter herself, the reconstruction of the defect was aesthetically good and functional. On the follow-up examination 3 months later she was in good physical and mental condition, and returned to her workplace.*

Conclusions *This case report is intended to remind us that regular follow-up examinations of patients after completed treatment is of utmost importance; in case of recurrence of suspicious changes they require to be treated by appropriate and most qualified medical experts.*

Key words *vulvar cancer; recurrence; postoperative follow-up*

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ENOSTRANSKI AKTINOMIKOTIČNI TUBO-OVARIJSKI ABSCES Z ENCEFALITISOM KOT ZAPLETOM – PRIKAZ PRIMERA

UNILATERAL ACTINOMYCOTIC TUBO-OVARIAN ABSCESS COMPLICATED WITH CEREBRITIS – A CASE REPORT

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Izvleček

Izhodišča *Tuboovarijski absces je resen zaplet medenične vnetne bolezni. Pojav medenične actinomikoze povezujejo z dolgoletno uporabo maternične vložka (MV), vendar je redko etiološki agens, razen pri dolgoletnih uporabnicah v pomenopavzi.[1, 2] Encefalitis je kot posledica medeničnega abscesa izjemno redek zaplet.*

Prikaz primera *V prispevku prikazujemo redek primer 56-letne uporabnice MV s tuboovarijskim abscesom, po katerem je kot zaplet nastopil encefalitis. Dvajset dni pred sprejemom na Ginekološko kliniko (GK) je tožila za utrujenostjo in slabostjo, bila je neješča, bruhala je in imela drisko. Po začetnem petdnevnem izboljšanju so se simptomi vrnili, pridružili so se: povišana telesna temperature do 40 °C in potenje, šibkost v nogah in težave s hojo ter hitra izguba teže. Z opisano simptomatiko je bila obravnavana v urgentni ambulanti GK. Bolnica ni imela nobenih kroničnih bolezni; bila je 30 let uporabnica MV. Pri kliničnem pregledu je bil trebuh občutljiv, vendar brez znakov draženja potrebušnice. Laboratorijski izvidi so pokazali zvišan CRP (107 mg/l), pospešeno SR (65 mm/h) ter normalno število levkocitov (7,8 × 109/L). Ultrazvok je pokazal 8x4 cm velik septiran medenični tumor levo v mali medenici s sumom za tubo-ovarijski absces. Bolnico smo sprejeli na oddelek, kjer smo odstranili MV po začetem parenteralnem zdravljenju z Metronidazolom, Ciprofloxacinom in Gentamycinom. Tumorski označevalci so bili ob sprejemu negativni. Naslednjega dne je bolnica razvila nevrološko simptomatiko z izgubo vida in levostransko hemiparezo. MR angiografija in CT glave sta pokazala lokalni edem možganov s sumom na encefalitis. Kljub izboljšanju izvidov o vnetnih parametrih smo zamenjali antibiotično zdravljenje: namesto Ciprofloxacina in Gentamycina smo uvedli Cefotaxime in Kloksacilin (Orbenin), ki bolje prehajata preko krvno-možganske pregrade. Odvzet je bil vzorec likvorja, v katerem so bili rezultati na HSV, nevrotropne viruse, maligne celice, TBC, ehinokoka, toksoplazmozo, cysticerkozo, patogene bakterije, glive, TILR2 in alfa TNF negativni. Napravljena je bila tudi biopsija možganov, ki ni pokazala patoloških sprememb, razen skupka beta-amiloidov. Z rektoskopijo smo izključili maligni proces na debelem črevesju in danki. Zaradi povečanja možganskega edema smo v zdravljenje vključili Manitol in Dexamethason. Ob začasni stabilizaciji naraščanja možganskega edema smo se odločili za eksplorativno laparotomijo, pri kateri smo našli retroperitonealni tubo-ovarijski absces, ki je delno prizadel steno rektosigme in se infiltriral v levi parametrij. Naparavili smo totalno histerektomijo z obojestransko adneksektomijo in resekcijo sigme po Hartmannu. Po operaciji je bolnica potrebovala asistirano predihavanje v splošni anesteziji. Kontrolni CT glave razen obojestranskega edema ni pokazal drugih sprememb. Ponovno je bila napravljena biopsija možganov; histološki izvid je bil negativen. V zdravljenje smo vpeljali Vancomycin in Ceftriaxon za petnajst dni. Po uvedbi tega zdravljenja je CT pokazal zmanjšanje možganskega edema in hipodenzne spremembe v parieto-occipitalnem delu obojestransko ter v paramedialnem frontalnem delu desno. Bolnica je ostala sedirana in intubirana na enoti Centralne intenzivne terapije (CIT). Po slabem mesecu dni je bil poskus zbujanja bolnice iz splošne narkoze neuspešen. Nevrologi so predlagali ponovitev biopsije možganov ali poskus intratekalnega vnosa antibiotikov. Naslednjega dne se je bolnica pred izvedbo predlaganih posegov spontano zbudila, bila je hemiparetična, vendar je bil stik z njo možen. Glede na histološki izvid abscesa in mikrobiološke izvide smo bolnico premestili na oddelek intenzivne nege GK, kjer je prejemala Imipenem, nato pa na Infekcijsko kliniko za nadaljevanje zdravljenja. Eno leto po sprejemu, po dolgotrajni parenteralni aplikaciji antibitikov in rehabilitaciji, je bolnica okrevala z minimalnimi posledicami možganske okvare.*

Rezultati *Histološki izvid je potrdil tubo-ovarijski absces, v katerem so bile prisotne kolonije Aktinomicet. Mikrobiološko so bili izolirani Enterococcus faecium, Bacteroides capillosus in anaerobni gram negativni bacili, občutljivi na Metronidazol, Klindamicin, Imipenem ter amoksicilin s klavulonsko kislino. Končna diagnoza je bila: tubo-ovarijski absces povzročen z Aktinomicetami z nedoločenim encefalitisom kot zapletom.*

Zaključki *Vnetje možganov ali možganski absces kot posledica tubo-ovarijskega abscesa sta izjemno redka. Actinomyces species ni kot del normalne nožnične flore, ker jo težko določimo v kulturi, jo pa pogosto izoliramo sočasno s tujki v telesu, posebno ob MV. Okužba je kronična in gnojna s težnjo po tvorbi abscesov. Medenična aktinomikoza je pri ženskah izjemno redka bakterijska okužba.[3] Diagnoza je zaradi nespecifičnosti simptomov in slikovnih prikazov težavna. Zdravljenje ni standardizirano in je odvisno od klinične oblike. Medikamentno zdravljenje temelji na podaljšanem zdravljenju s Penicilinom G.[4] Izid je pri pravilno zdravljeni medenični aktinomikozi dober.[3, 4] Izkušnje z okužbo centralnega živčnega sistema z Aktinomicetami pa kažejo, da je ta potencialno smrtna[5] in moramo na njih pomisliti pri bolnikih z možganskim abscesom ali kot v našem primeru z vnetjem možgan.*

Ključne besede *tubo-ovarijski absces; Actinomyces; encefalitis*

Abstract

Background *Tuboovarian abscess is a serious complication of pelvic inflammatory disease. Pelvic actinomycosis may correlate with long term use of intra-uterine device (IUD), but is uncommon cause of inflammation, except in postmenopausal IUD users.[1, 2] Tuboovarian abscess complicated with cerebritis is relatively uncommon condition.*

Methods *We present a rare case of a 56-years-old woman with IUD, developing tuboovarian abscess that complicated with cerebritis. Twenty days before admittance to the Gynecologic clinic, she complained of fatigue and nausea, anorexia, vomiting and diarrhea. After an initial improvement for 5 days her symptoms recurred, profounded with sweating and fever up to 40 °C, leg weakness and walking difficulties, and weight loss. In that condition she was presented to our emergency room. There was no history of chronic disease. The patient had an IUD for the past 30 years. On physical examination the abdomen was tender, but without signs of peritoneal irritation. Laboratory studies revealed elevated CRP (107 mg/L), ESR (65mm/h) and normal number of leukocytes (7.8 × 109/L). Ultrasound showed 8x4 cm left infraumbilical septated mass suspect for tubo-ovarian abscess.. She was hospitalized, IUD was removed and Metronidazol, Ciprofloxacin and Gentamycin were started parenterally. Tumor markers were negative. On the next day she developed neurologic symptoms with blindness and left-hemiparesis. MR angiography and CT of the head revealed local brain edema, suspect for cerebritis. Although the laboratory findings of inflammation were decreasing, we changed the antimicrobial therapy with Cefotaxime and Kloksacilin (Orbenin) instead of Metronidazol and Ciprofloxacin because of better blood-brain barrier transport. Cerebrospinal fluid tests for HSV, neurotropic viruses, malignant cells, TBC, echinoccocus, toxoplasmosis, cysticercosis, pathogenic bacteria, fungi, TILR2, and TNF alfa were negative. A brain biopsy was preformed and no pathologic changes were found, except a group of beta amyloides. Rectoscopy ruled out malignancy. Because of enlargement of the brain edema Mannitol and Dexamethazon were added in the therapeutic regimen. Temporarily stabilizing the increment of brain edema, we performed exploratory laparotomy that revealed a left retroperitoneal abscess infiltrating the sigmoid colon and left parameters. Left fallopian tube and ovary were modified in a solid tumor. A total hysterectomy with bilateral salpingoophorectomy with Hartmann resection of sigmoid colon was performed. After operation general inhalation anesthesia was initiated at Central Intensive care unit (CIT). Control brain CT showed diffuse bilateral brain edema. Brain biopsy was performed and the histology results were negative. Vancomycin and Ceftriakson were added in therapy for 15 days. After this therapy, CT revealed a decrease in the brain edema and isolated bilateral hypodense parietoocipital formations and a right frontal paramedial hypodense formation. The patient was kept sedated and intubated. Approximately one month later a try of awaking the patient from general anesthesia was unsuccessful. Our neurologic team proposed either a repeat of the brain lesion biopsy or intrathecal empiric antimicrobial therapy. On the next day, before performing either of proposed procedures, the patient completely awaked and was contactable but with left-sided hemiparesis. According to the hystologic and microbyologic findings the patient was transferred to Intensive Care unit of*

our Department where Imipenem was started, and later transferred to Infectology for further treatment. Approximately one year after the hospitalization, long-term use of intravenous antibiotics and rehabilitation, the patient fully recovered with minimal consequences of brain damage.

Results *Hystologically the removed left-sided mass was a tuboovarian abscess with actinomycotic colonies. On microbiologic examination Enterococcus faecium, Bacteroides capillosus and Anaerobic gram negative bacilli were isolated, sensitive to Metronidazol, Clindamycin, Imipenem and Amoksicilin with Clavulonic Acid. The definite diagnosis was tuboovarian abscess caused by actinomyces complicated with etiologically undeterminated cerebritis.*

Conclusions *Tuboovarian abscess in a postmenopausal woman as a cause for brain inflammation or abscess is an absolute rarity. Actinomyces species are not generally considered as a part of the normal vaginal flora but rather are associated with the presence of a foreign body, most often an IUD. It is a chronic supurative infection, with a tendency to form abscess. Pelvic actinomycosis is a rare bacterial disease in women (3). It is difficult to diagnose because of the non specific clinical symptoms and imaging findings. Treatment is not standardized and depends on the clinical form. Medical therapy is based on long-term Penicillin G (4). The prognosis of correctly treated pelvic actinomycosis is generally good (3, 4). Experiences with the infection of the CNS by Actinomyces showed that it is potentially fatal (5) and should be considered in those patients with cerebral abscesses or cerebral infection as evident from our case.*

Key words *tuboovarian abscess; actinomyces; cerebritis*

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UPORABA ANALIZATORJA POCT V URGENTNEM ODDELKU: VPLIV NA ČAS ANALIZE HCG V SERUMU

IMPLEMENTATION OF A POINT-OF-CARE ANALYZER IN THE EMERGENCY DEPARTMENT: IMPACT ON SERUM HCG TURNAROUND TIME

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Izvleček

Izhodišča *Veliko bolnišničnih laboratorijev ima težave pri zagotavljanju hitrih storitev za urgentne oddelke zaradi težav z logistiko, pomanjkanjem osebja in tehničnih dejavnikov, ki se nanašajo na opravljanje nekaterih testov (zlasti imunoloških). Enostavni postopki za določanje nekaterih parametrov v polni krvi omogočajo opravljanje nekaterih laboratorijskih testov hitro brez zapletenih instrumentov ali visoko usposobljenega osebja.*

Material in metode *Naša zakonodaja predvideva uporabo POCT (point-of-care testov). Zahteve za nadzor kakovosti, zagotavljanja kakovosti, dokumentacije, usposabljanja in usposobljenosti osebja so razlog, da se POCT teže izvaja v urgentnih enotah, kjer je več osebja, vključno z zdravniki in medicinskimi sestrami. V prispevku želimo podati rezultate študije o uporabi analizatorja PO CT v urgentni ginekološki ambulanti za testiranje nosečnosti. Gre za analizator Pathfast (Mitcubishi Kagaku – Japonska) za merjenje hCG v polni krvi. V študiji smo določili celoten čas do rezultata analize (turnaround time – TAT) in ocenili zadovoljstvo klinika oz. medicinske sestre pred in po začetku izvajanja programa POCT. TAT vključuje predanalitsko, analitsko in poanalitsko fazo (t. i. čas "vena do možganov"). Predanalitska faza, ki vključuje odvzem krvnega vzorca v ambulanti ter prenos vzorcev krvi v centralni laboratorij, traja v povprečju 92 minut, kar je 41,8 % TAT. Čeprav centralni laboratorij jemlje vzorce iz urgentne ambulante kot prednostne, je povprečni laboratorijski čas 66 minut, kar je 30,0 % TAT. Povprečni čas od potrditve rezultatov s strani laboratorija do takrat, ko zdravnik uporabi te rezultate v informacijskem sistemu, pa je 62 minut, kar je 28,2 % TAT. Delež posameznih faz v celotnem času 220 minut je 41,8 % za predanalitsko fazo, 30 % za analitsko fazo in 28,2 % za poanalitsko fazo. Doseči postavljeni cilj za celotni čas analize hCG, tj. 45 minut, v centralnem laboratoriju ni izvedljivo.*
V primerjavi s centralnim laboratorijem smo s to študijo dokumentirali pomembno skrajšanje časa do prejema rezultata analize hCG. Ta študija je tudi pokazala skrajšanje časa obravnave bolnic v urgentni ambulanti. Zdravniki so bili zadovoljni z natančnostjo testiranja POCT in bistveno bolj zadovoljni s krajšimi časi analiz z analizatorjem POCT.

Zaključki *Nadaljnje študije bi se morale osrediniti na bolj natančno opredelitev učinkovitosti POCT, vključno z modeli za optimizacijo finančnih sredstev, vodenja kakovosti in ovrednotenje uporabnosti novih testov, ki bodo na voljo za POCT.*

Ključne besede *analiza HCG; časovni interval; zadovoljnost uporabnikov*

Abstract

Background *Many hospital laboratories have difficulty providing prompt service to the emergency departments (ED) because of problems with logistics, staff shortages, and technical factors relating to the performance of some tests (particularly immunoassays). Simple methods for whole-blood make it possible to perform some laboratory tests rapidly without complex instruments or highly trained personnel.*

Material and methods

Our legislation foresees the use of Point of Care Testing – POCT. Requirements for quality control, quality assurance, documentation, and competency training of staff have made POCT more difficult to implement in the ED, where multiple staff including physicians and nurses may be required to perform patient testing.
We report a study of the implementation of a POCT analyzer in our ED for pregnancy testing. The analyzer used was Pathfast (Mitsubishi-Kagaku) for the measurement of hCG in whole blood. We measured turnaround time test (TAT), and clinician/nurse satisfaction with test accuracy and TAT before and after the initiation of the POCT program.
The TAT required by clinicians includes the preanalytic, analytic, and postanalytic phases (so-called »vein-to-brain« time). Although the central laboratory takes the ED samples as priority, the average time to collect and transport specimens from the ED to the central laboratory was 92 minutes, and the average time from the reporting of results in the laboratory until physicians acknowledged these results in the ED information system was 62 minutes. In contrast, the average in-laboratory TAT was 66 minutes. Therefore, the preanalytic, analytic, and postanalytic phases accounted for 41.8 %, 30 %, and 28.2 % of the total TAT, respectively. Meeting our goals for a TAT of 45 minutes (human chorionic gonadotropin), would not be feasible using the central laboratory.
Compared to central laboratory testing, this study documents a significant decrease in the in-laboratory TAT after the implementation of a POCT program. This study also demonstrates a decrease in patient LOS in the ED for the patients receiving POCT. Clinicians were satisfied with the accuracy of POCT testing and were significantly more satisfied with the TAT test using the POCT option.

Conclusions

Future studies should focus on more accurately defining the efficiencies achieved by POCT, including optimizing models for financial and quality management and evaluating the utility of new tests that become available for POCT.

Key words *HCG analysis; time-interval; users' satisfaction*

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UPORABOST PRIPOMOČKA PELVEXISER URO-STOP

THE USABILITY OF PELVEXISER URO-STOP DEVICE

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Izvleček

Izhodišča *Biološka povratna zveza (BPZ) (ang. biofeedback) se uporablja kot dodatek k urjenju mišic medeničnega dna (TMMD). Le ta vključuje predvsem vaginalno in analno površinsko elektromiografijo ter meritve uretralnega in vaginalnega tlaka ob kontrakciji mišic medeničnega dna (MMD). Iz pregleda literature povzemamo, da TMMD v kombinaciji z BPZ nima dodatnega učinka, lahko pa je uporaben kot pomoč pri učenju pravilne kontrakcije MMD in za motivacijo. Želeli smo ugotoviti, kako uporaben je pripomoček Pelvexiser URO-STOP za spodbujanje zavedanja in usklajenega delovanja MMD, samoučenja pravilne kontrakcije MMD ter povečanje zmogljivosti MMD.*

Metode *K sodelovanju so bile povabljene ženske med 18. in 65. letom starosti z disfunkcijo MMD, ki je bila opredeljena kot klinično prisotna urinska inkontinenca in šibka jakost MMD oziroma odsotnost kontrakcije MMD. Specialist ginekologije in porodništva je napotil preiskovanke k fizioterapevtu. Na prvi fizioterapevtski obravnavi so preiskovanke izpolnile začetni vprašalnik, prejele so natančna pisna in ustna navodila o uporabi pripomočka Pelvexiser URO-STOP (pripomoček beleži spremembo pritiska v nožnici med kontrakcijo MMD). Za oceno funkcije MMD je bilo uporabljeno opazovanje in vaginalna palpacija MMD (ob tem preiskovanke niso dobile nikakršne povratne informacije o pravilnosti/nepravilnosti izvedbe kontrakcije MMD). Za oceno zmogljivosti MMD je bila uporabljena modificirana lestvica Oxford. Preiskovanke so nato 4 tedne pripomoček uporabljale same doma. Po tem obdobju smo preiskovankam ponovno ocenili funkcijo MMD in izpolnili zaključni vprašalnik. Z uporabo opisne statistike smo proučili podatke iz vprašalnikov, dnevnika TMMD in ocenjevalnega lista za oceno funkcije MMD.*

Rezultati *V raziskavo je bilo vključenih 8 preiskovank (starost 41 ± 13) z disfunkcijo MMD, ki so pisno privolile v raziskavo. Sedem preiskovank je bilo pred uporabo pripomočka sposobnih hoteno kontrahirati MMD. Pri eni preiskovanki ni bilo zaznati hotene kontrakcije. Tudi po uporabi pripomočka pri tej preiskovanki ni bilo zaznati hotene kontrakcije MMD. Pred uporabo pripomočka so bili pri polovici preiskovank ob poskusu hotene kontrakcije prisotni več kot trije substitucijski gibi (zadrževanje diha, aktiviranje zunanjih abominalnih mišic in adduktornih mišic kolčnega sklepa). Po uporabi pripomočka se vrsta in pogostost substitucijskih gibov ni zmanjšala. Zmogljivost MMD se je po uporabi pripomočka pri vseh preiskovankah povečala. Nobeni preiskovanki ni uspelo TMMD izvajati v polnem predpisanem obsegu. Vse preiskovanke so menile, da je pripomoček enostaven za uporabo, vendar jih je polovica menila, da ga ne bi znale uporabljati, če jim fizioterapevt ne bi predhodno razložil kako uporabljati pripomoček. Ena preiskovanka je poročala, da je vzdrževanje higiene pripomočka težavno, dve preiskovanki pa sta menili, da je vaginalna sonda prevelika in pretrda.*

Zaključki *Iz rezultatov je razvidno, da pripomoček Pelvexiser URO-STOP ni bil učinkovit za učenje pravilne hotene kontrakcije MMD. Ob pravilni hoteni kontrakciji MMD je pripomoček lahko koristen dodatek k TMMD za izboljšanje zmogljivosti MMD. Za učinkovito uporabo pripomočka je potrebna natančna ocena funkcije MMD, individualno učenje pravilne hotene kontrakcije MMD in učenje pravilne uporabe pripomočka s strani usposobljenega zdravstvenega delavca.*

Ključne besede *biološka povratna zveza; hotena kontrakcija mišic medeničnega dna; trening mišic medeničnega dna*

Abstract

Background *The biofeedback is used as an adjunct to pelvic floor muscle training (PFMT). It includes primarily the vaginal and anal surface electromyography and urethral and vaginal squeeze pressure measurements. However, several systematic reviews concluded that combined therapy seems to have no additional benefit compared to PFMT alone, but might be useful for some women to learn how to perform a correct PFM contraction and to increase motivation. The aim of the study was identify the degree of usability of the Pelvexiser URO-STOP device in raising the awareness and coordinated PFM function, self-learning of correct voluntary PFM contraction and the performance of PFM.*

Methods *Women between 18 and 65 years of age were invited to participate in the study. The participants presented with PFM dysfunction which was defined as clinically present urinary incontinence and weak PFM or absence of PFM contraction, respectively. They were referred to physiotherapy by a specialist in gynaecology and obstetrics. In the first physiotherapy session the participants filled in a preliminary questionnaire and received detailed written and verbal instructions on the use of Pelvexiser URO-STOP device (the device measures the change in vaginal squeeze pressure). The PFM function was assessed by visual observation and vaginal palpation. During the assessment the participants were offered no feedback on the correctness/incorrectness of PFM contraction performance. The PFM function was assessed by a modified Oxford scale. The participants used the device for four weeks by themselves at home. After this period they filled in a final questionnaire and their PFM function was re-assessed. Descriptive statistics were used to summarize and analyze the data from the questionnaires, PFMT diaries and the PFM function assessment sheets.*

Results *Included in the study were 8 female subjects (age 41 (±13) experiencing PFM dysfunction who had given written consent to participate in the study. Prior to the study, seven women were able to perform a correct voluntary PFM contraction. At one woman no voluntary contraction was detected even after having used the device. Before the use of the device, the attempts to contract the PFM were accompanied by more than three substitute movements at one half of the participants (breath holding, enhanced inhaling, contraction of outer abdominal muscles and hip adductor muscles). After the use of the device the type and frequency of the substitute movements were not decreased. The PFM function improved at all women after the use of the device but none was capable to perform the PFMT in the full range prescribed. According to the participants the device was simple to use but half of them would not be able to employ it without prior instruction offered by a physiotherapist. One woman reported that the hygienic maintenance of the device was difficult and two of them commented on the size and hardness of the vaginal probe.*

Conclusions *The results obtained indicate that the Pelvexiser URO-STOP device was not effective in learning the correct PFM contraction. However, it can present a useful adjunct to PFMT to increase the PFM performance. A pre-condition to achieve the desired effect is an exact preliminary assessment of the function of PFM, individual training of the correct voluntary PFM contraction preceded by a healthcare worker's instruction on the correct use of the device.*

Key words *biofeedback; voluntary pelvic floor muscle contraction; pelvic floor muscle training*

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KLINIČNI TESTI ZA OCENJEVANJE BOLEČINE MEDENIČNEGA OBROČA V NOSEČNOSTI IN PO PORODU

CLINICAL TESTS FOR THE ASSESSMENT OF THE PELVIC GIRDLE PAIN IN PREGNANCY AND POSTPARTUM

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Izvleček

Izhodišča *Bolečina medeničnega obroča v povezavi z nosečnostjo« (BMON) (angl. pregnancy-related pelvic girdle pain) je izraz, ki opisuje bolečino v ledveno-križničnih, križnično-črevničnih in sramničnih sklepih. Rezultati metodološko kakovostno zasnovanih študij navajajo prevalenco BMON 20 %. BMON zahteva obsežen fizioterapevtski pregled, s katerim postavimo oziroma potrdimo diagnozo, načrtujemo zdravljenje ter ocenjujemo bolničin napredek. Fizioterapevtski pregled je sestavljen iz ocenjevalnih testov, ki morajo imeti določene lastnosti, kot je varnost, izvedljivost, ponovljivost, občutljivost, specifičnost in veljavnost. Namen prispevka je, da na temelju pregleda literature ugotovimo, kateri klinični testi za ocenjevanje BMON v nosečnosti in po porodu izpolnjujejo ta merila in so primerni za diagnosticiranje BMON v kliničnem okolju.*

Metode *Računalniško iskanje v sistemu PubMed, Cinahl, Embase, Index Medicus in v registru nadzorovanih študij Cochrane. Iskanje je bilo omejeno na besedila/članke v angleškem in slovenskem jeziku (pregledana so bila tudi besedila v drugih jezikih, če so vsebovala izvleček v angleškem jeziku) in za obdobje od leta 1980 do leta 2008. Ključne besede za iskanje so bile: nosečnost/bolečina medeničnega obroča/, nosečnost/klinični testi, križnično-črevnični sklep/sramnična zrast. Z ročnim iskanjem je bila pregledana literatura v knjigah in preglednih člankih. Iskanje literature ni bilo omejeno le na randomizirane kontrolirane študije, ampak so bile vključene tudi bazične študije.*

Rezultati *V pregled literature je bilo vključenih devet študij, ki so analizirale teste za oceno BMON v nosečnosti in po porodu. V študijah so ovrednotili in analizirali šest provokativnih testov za ugotavljanje prisotnosti bolečine v križnično-črevničnem sklepu: provokativni test za posteriorno stran medenice (angl. Posterior pelvic pain provocation test – P4), Patrickov Faberjev test (angl. Patrick's Faber test), palpacija dolgega dorzalnega ligamenta križnično-črevničnega sklepa (angl. Palpation of the long dorsal ligament), test kompresije, test razmika in Menelov test (angl. Menell's test), dva provokativna testa za ugotavljanje bolečine v sramnični zrasti, bolečina ob palpaciji in modificiran Trendelenburgov test, in en funkcijski test medeničnega obroča za ugotavljanje prizadetosti, aktivni dvig stegnjenega spodnjega uda od podlage (angl. Active straight leg raise – ASLR). Testi z največjo občutljivostjo, specifičnostjo in zanesljivostjo za testiranje bolečine v križnično-črevničnem sklepu so bili provokativni test za posteriorno stran medenice, Patrickov Faberjev test in palpacija dolgega dorzalnega ligamenta križnično črevničnega sklepa. Za testiranje bolečine, abnormalnosti in asimetrije v področju sramnične zrasti sta se palpacija in modificirani Trendelenburgov test v študijah izkazala kot testa z najboljšimi lastnostmi. Kot funkcijski test medeničnega obroča pa se priporoča aktivni dvig stegnjenega spodnjega uda od podlage.*

Zaključki *BMON se lahko diagnosticira s provokativnimi testi, palpacijskimi testi in funkcijskim testom. Večina v študijah ovrednotenih testov je imela visoko specifičnost, kar pomeni, da je velika verjetnost, če so negativni, da ženska v nosečnosti ali po porodu nima bolečine v področju medeničnega obroča. Ker je njihova občutljivost nekoliko slabša, je priporočljivo izvesti vse teste in ne izključiti bolečine na podlagi enega negativnega testa. Vsi testi so enostavni in primerni za ugotavljanje BMON v kliničnem okolju.*

Ključne besede *nosečnost; bolečina medeničnega obroča; klinični testi*

Abstract

Background *Pregnancy-related pelvic girdle pain (PGP) refers to the pain in the lumbosacral region, the sacroiliac joints and the symphysis pubis joint. The results of the high methodological quality studies indicate that the point prevalence of pregnant women suffering from PGP is about 20 %. Pregnancy-related PGP requires a comprehensive physiotherapy assessment in order to make or confirm a diagnosis, plan the treatment and evaluate the patient's condition. Physiotherapy assessment includes clinical diagnostic tests which should satisfy the criteria of safety, feasibility, reliability, sensitivity, specificity and validity. The aim of the present paper was to systematically review the literature on clinical diagnostic tests of PGP in order to determine which clinical tests meet the necessary criteria and are appropriate for clinical examination of PGP in pregnancy and postpartum.*

Methods *PubMed, Cinahl, Embase, Index Medicus databases and the Cochrane controlled trials register from 1980 to 2008 were searched using the key words, pregnancy/pelvic girdle pain, pregnancy/clinical tests/sacroiliac joint/symphysis pubis. Only the articles/texts in English and Slovene were reviewed unless translated abstract was available. Additional manual searches of the reference lists in books and review articles were undertaken. Along with the randomized clinical studies the literature search encompassed also the basic studies.*

Results *Nine studies evaluating the tests for clinical examination of the pregnancy-related PGP met the criteria for inclusion in this review. The studies evaluated and analysed six provocation tests for the sacroiliac joint, namely, the Posterior pelvic pain provocation test (P4), Patrick's Faber test, palpation of the long dorsal ligament, compression test, separation test, Menell's test as well as two provocation tests for the symphysis pubis joint (pain palpation and a modified Trendelenburg test) and one functional pelvic girdle test to assess the impairment (Active Straight Leg Raise –ASRL). The tests exemplifying the highest level of specificity and reliability to identify the pain in the sacroiliac joint proved to be the Posterior pelvic pain provocation test, Patrick's Faber test and the palpation of the long dorsal ligament of the sacroiliac joint. According to the studies, the palpation and a modified Trendelenburg test are most appropriate to identify the pain, abnormalities and symphysis pubis asymmetries. The active straight leg raise is recommended as a functional test of the pelvic girdle.*

Conclusions *PGP can be diagnosed by pain provocation tests and pain palpation tests. Most of the evaluated tests have a very high specificity indicating that, if negative, it is likely that a patient does not suffer from pain in the pelvic girdle during pregnancy and in the postpartum period. The sensitivity is, however, lower. It is therefore recommended to perform all the tests, not to rule out PGP, if one test is negative. All the recommended tests are simple to carry out and appropriate for clinical examination of pregnancy-related PGP.*

Key words *pregnancy; pelvic girdle pain; clinical tests*

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POŠKODBE ANALNEGA SFINKTRA OB PORODU

ANAL SPHINCTER INJURIES (OASIS) AT DELIVERY

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Izvleček

Izhodišča

Inkontinenca blata močno vpliva na kakovost življenja. Pojavlja se pri 4–19 % žensk in je statistično povezana s številom vaginalnih porodov. Zaradi socialne ožigosanosti bolnice poiščejo pomoč pozno ali je sploh ne poiščejo, večinoma pa jih napotijo h gastroenterologu ali kolorektalnemu kirurgu.
Incidenca poškodb analnega sfinktra, prepoznanih ob porodu, je 1–2 %. Z uporabo ultrazvočne preiskave z analno sondo pa so študije pokazale incidenco poškodb sfinktra ob porodu kar od 28 do 41 %.
Odvisno od stopnje poškodbe analnega sfinktra lahko pride do težjega zadrževanja ali nezmožnosti zadrževanja vetrov, zmanjšane možnosti zadrževanja blata ali celo popolne izgube kontrole nad odvajanjem blata. Približno dve tretjini žensk s prikrito poškodbo analnega sfinktra sprva nima asimptomov, imajo pa 50-odstotno možnost, da kasneje v življenju razvijejo inkontinenco blata. Zaradi hipoestrogenizma, nadaljnjih poškodb medeničnega dna ob naslednjih porodih in atrofije analnega sfinktra s starostjo se lahko simptomi in znaki razvijejo šele čez leta.
Dejavniki tveganja za nastanek rupture analnega sfinktra ob porodu v populaciji naraščajo (višja starost ob prvem porodu, naraščajoča porodna teža in obseg glavice otrok). Pričakovana življenjska doba pa se viša. Zato je zelo pomembno pravočasno odkrivanje in zdravljenje tovrstnih poškodb
Izrednega pomena je pravočasno odkrivanje in šivanje teh poškodb, najbolje ob samem porodu. Za prepoznavanje je pomembno natančno poznavanje anatomije medeničnega dna, prepoznavanje dejavnikov tveganja, dejavno iskanje tovrstnih poškodb, ustrezno zdravljenje ter sledenje in vodenje naslednjih nosečnosti.
Sčasoma analni sfinkter po poškodbi atrofira in izgine. Sekundarna popravila analnega sfinktra imajo slab funkcionalni uspeh.

Vsebina

Prikazujemo pregled sodobnih smernic glede poškodb analnega sfinktra.
Analni sfinkter sestavlja zunanji (eksterni) analni sfinkter (EAS) in notranji (interni) analni sfinkter (IAS). Prečnoprogasti EAS je sestavljen iz treh delov (subkutani, povrhnji, globoki) in je združen z m. puborectalis posteriorno. Gladkomišični IAS je zadebeljeno nadaljevanje cirkularnega sloja gladkih mišic rektuma. Vmes je longitudinalna plast mišic. IAS prispeva k 70 % tonusa v mirovanju in je ena redkih mišic v telesu, ki so tonično skrčene. EAS prispeva 30 % tonusa v mirovanju in praktično ves pritisk med dejavno kontrakcijo. Ob poškodbi EAS pride do nezadostne kontrakcije ob napolnjenju in draženju rektuma, zato nastopi urgentna inkontinenca: bolnica čuti pritisk, vendar blata ne more zadržati, če ne uspe priti pravočasno do stranišča. Če se poškoduje še IAS, pa pride do popolne inkontinence in popolne izgube kontrole nad uhajanjem blata.
Poškodbe perineja delimo na 4 stopnje glede na globino poškodbe. Pri prvi stopnji je poškodovana le sluznica vagine, pri drugi stopnji še mišice perineja do analnega sfinktra, pri tretji stopnji je poškodovan še analni sfinkter (mišica zapiralka), pri rupturi četrte stopnje pa poleg naštetih struktur še sluznica rektuma.
Novejše smernice priporočajo še natančnejšo razdelitev rupture perineja III. stopnje gleda na to, kolikšen del analnega sfinktra je poškodovan:
3a = < 50 % zunanjega sfinktra
3b = > 50 % zunanjega sfinktra
3c = notranji sfinkter
Ultrazvočna preiskava z analno sondo je danes zlati standard pri diagnostiki in sledenju poškodb analnega sfinktra. Analni sfinkter se prikaže v celotni dolžini od globokega dela od roba mišice puborektalis (končni del levatorjev, ki na sliki daje obliko črke U), povrhnjega dela pa do izhoda (podkožni del). Notranji sfinkter je viden kot hipoehogeni obroč, zunanji pa hiperehogeni obroč. Pri sumu na poškodbo je v pomoč dinamična ultrazvočna slika, saj

se ob hoteni kontrakciji konci raztrganega sfinktra razmaknejo. Vedno bolj se uveljavlja 3D ultrazvočne prieiskave analnega sfinktra, ki pa še ni standardizirana.
Poleg ultrazvočne preiskave se uporablja tudi manometrija analnega sfinktra, ki pokaže funkcionalno motnjo, ter EMG pudendalnega živca in EMG analnega sfinktra.
Dejavniki tveganja za nastanek rupture perineja III. in IV. stopnje, opisani v tuji literaturi, so: velik plod, kleščni porod (ne pa tudi z vakumskim ekstraktorjem), okcipitoposteriorna vstava, zastoj ramen in podaljšana druga porodna doba, mediana epiziotomija, starost nad 35 let, prestane operacije na perineju. Carski rez dokazano ščiti pred poškodbami analnega sfinktra. Študije kažejo, da restriktivna uporaba mediolateralne epiziotomije zmanjšuje incidenco rupture perineja III. stopnje v primerjavi s spontanimi porodi.
Pri sumu na poškodbo analnega sfinktra se le-ta oceni z rektalnim pregledom neposredno pred šivanjem poškodbe perineja ali epiziotomije. Vlakna zunanjega sfinktra so bolj rdeča, notranji sfinkter (gladka mišičnina) pa je svetlejše barve. Kontinuiteta mišice se tipa med kazalcem in palcem, oceni se tudi moč hotene kontrakcije. Takoj po porodu je hotena kontrakcija lahko zmanjšana kljub intaktnemu sfinktru zaradi izgube občutka v perineju ali epiduralne analgezije.
Študije trenutno kažejo boljše rezultate pri šivanju sfinktra po metodi overlap v primerjavi s tehniko konec s koncem. Zaenkrat še poteka večja randomizirana kontrolirana raziskava, ki bo dala dokončne odgovore.
Med operacijo je priporočeno profilaktično dajanje antibiotika širokega spektra (cefuroksim 1,5 g + metronidazol 500 mg), ki ga nadaljujemo peroralno 5–7 dni.
Dieta po operaciji ni potrebna, bolnice naj prejemajo laktulozo 15 ml / dan 7–10 dni, potrebna je skrb za redno odvajanje blata.
Priporočeno je vstaviti kateter za 24 ur ter jemati analgetike z NSAR ter slediti bolnice po porodu v perinealni kliniki čez 3–6 mesecev z ultrazvočno preiskavo z analno sondo in manometrijo.

Zaključki *Ruptura analnega sfinktra med porodom pogosto ostane neprepoznana, kar lahko dolgoročno vodi v inkontinenco blata in s tem povezano slabšo kakovost življenja. Za dobro celjenje je izredno pomembna takojšnja prepoznava in ustrezno zdravljenje.*

Ključne besede *poškodbe analnega sfinktra; anatomija perineja; ruptura perineja 3. stopnje; ultrazvočna preiskava z analno sondo*

Abstract

Background *Anal incontinence severely impairs quality of life. It affects 4 to 19 % of women and is statistically related to number of vaginal deliveries. It is grossly underreported and most patients that do seek help are referred to gastroenterologists or colorectal surgeons.*
Incidence of recognized sphincter injuries at time of delivery is 1 to 2 %. However studies with anal ultrasound showed incidence of anal sphincter injuries at 28 to 41 %.
Depending on the degree of injury symptoms range from partial to complete inability to control passing of winds, liquid or solid stools. About three thirds of patients are asymptomatic in puerperium, however half of them are at risk of developing anal incontinence in later life. Hypoestrogenisem, additional perineal trauma during consequent deliveries and sphincter atrophy can unmask anal sphincter damage years later.
Timely recognition and treatment are vital for good long term results and quality of life, if possible immediately after delivery. Good knowledge of perineal anatomy, recognition of risk factors, intense search and appropriate treatment and follow-up are essential to management of anal sphincter injuries. All secondary sphincter repair is less effective.

Content *Updated overview of current opinion and guidelines on anal sphincter injuries are presented.*
Anal sphincter is composed of external anal sphincter (EAS) and internal anal sphincter (IAS). Striated EAS is divided into three parts – subcutaneous, superficial, deep, and connected to puborectalis muscle posteriorly. Smooth-muscled IAS is a continuation of a circular smooth-muscle layer of rectum. In between there is a thin longitudinal muscle layer. IAS constitutes 70 % of resting tone and is under constant contraction. EAS contributes to 30 % of resting tone and almost all pressure during active contraction. EAS injury leads to insufficient contraction after rectal sampling and filling which causes urgency – patient can feel the pressure but cannot hold bowel contents for long. IAS injury leads to complete inability to control passing of bowel contents.

Perineal tears are classified to four degrees depending on tear depth. With first degree tear only vaginal mucosa is torn, second degree perineal muscles are damaged, third degree describes any tearing of anal sphincter and fourth of rectal mucosa. New guidelines recommend further classification of 3rd degree tears:
3a = < 50 % EAS ruptured
3b = > 50 % EAS ruptured
3c = IAS rupture
Ultrasound with anal plug is nowadays considered to be the golden standard for diagnosis and follow-up of anal sphincter injuries. Entire length of anal sphincter muscle is shown from U shaped puborectalis muscle to anus. IAS appears as hypo-echoic homogenous circle around rectal mucosa, while EAS appears as outer hyper- echoic heterogenous circle. During voluntary contraction distance between ruptured ends of EAS enlarges. 3D ultrasound shows promising results but is not yet standardized. Anal sphincter manometry, pudendal nerve latency and EMG of anal sphincter also contribute valuable information on anal sphincter function and injuries.
Risk factors are: fetal weight over 3500g, forceps delivery (but not vacuum extraction) occipito-posterior presentation, shoulder dystocia, prolonged second stage of delivery, median episiotomy, previous anorectal surgery and maternal age over 35 years at first delivery are described as risk factors. Caesarean section prevents anal sphincter injuries. Studies show that restrictive use of mediolateral episiotomy in comparison to spontaneous delivery prevents anal sphincter injuries.
Rectal examination prior to suturing perineal tears is essential for timely recognition of anal sphincter injuries. EAS appears more read while IAS smooth muscle has a lighter colour (white meat). Sphincter continuity can be palpated between index finger and thumb (pill-rolling motion) and voluntary contraction felt. Immediately after delivery voluntary contraction can be diminished or absent due to temporary loss of sensation or epidural analgesia.
Studies currently show better results with overlap comparing to end-to-end technique for sphincter repair. Further randomised controlled trial will give final answers on the subject.
Application of wide-spectrum antibiotics, continued oraly for 5 to 7 days is recommended. No specific diet is needed, patients are advised to take lactulose 15 ml per day for 7 to 10 days and defecate regularly. Application of Foley catheter for 24 hours and NSARs are also recommended. Follow up with anal ultrasound and manometry after 3 to 6 months in perineal clinic is mandatory.

Conclusions *Anal sphincter ruptures during vaginal delivery often remain unrecognised, which can later lead to fecal incontinence and impaired quality of life. Timely recognition and proper treatment are vital to good healing results.*

Key words *anal sphincter injury; perineal anatomy; 3rd degree perineal tear; anal ultrasound*

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PRIKRITE POŠKODBE ANALNEGA SFINKTRA V PORODNIŠNICI LJUBLJANA – INCIDENCA IN DEJAVNIKI TVEGANJA

OCCULT ANAL SPHINCTER INJURIES (OASIS) IN DEPARTMENT OF PERINATOLOGY IN LJUBLJANA – INCIDENCE AND RISK FACTORS

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Izvleček

Izhodišča

Vaginalni porod je najpomembnejši dejavnik tveganja za nastanek inkontinence blata, ki izjemno poslabša kakovost življenja. Tuji avtorji navajajo, da pride do prikritih ruptur analnega sfinktra po vaginalnem porodu med 20 do 40 %. Pojavnost prepoznanih ruptur analnega sfinktra v Sloveniji je 1,7 %, incidenca prikritih ruptur v naši populaciji pa še ni znana. Carski rez dokazano ščiti pred poškodbami analnega sfinktra. Med dejavniki tveganja tuje raziskave navajajo podaljšano drugo porodno dobo, težo otroka nad 3500 g, nepravilno vstavo, kleščni porod, starost porodnice nad 35 let ob prvem porodu, prvi porod. V puerperiju se le redke ženske pritožujejo zaradi težav z defekacijo, če jih o tem ciljano ne vprašamo, zato je lahko prava incidenca tovrstnih poškodb močno podcenjena. Prej kompenzirana disfunkcija analnega sfinktra se lahko klinično pokaže šele v menopavzi. Razlog za to je verjetno atrofija mišic in veziva medeničnega dna ter samega analnega sfinktra ob pomanjkanju estrogenske podpore v tem obdobju. Z ultrazvočno preiskavo z analno sondo smo želeli preveriti incidenco okultnih poškodb analnega sfinktra pri prvorodkah po vaginalnem porodu, njihovo povezavo z nastankom simptomov in opredeliti dejavnike tveganja za nastanek tovrstnih poškodb v Porodnišnici Ljubljana. Poleg tega smo želeli ugotoviti, kolikšen delež bolnic po poškodbi ima simptome takoj po porodu.

Metode

V Porodnišnici Ljubljana smo od januarja do junija 2009 z ultrazvočno napravo z analno sondo pregledali 26 prvorodk po vaginalnem porodu ter primerjali podatke o porodu iz porodnega zapisnika. Izključili smo vse bolnice, ki so rodile s carskom rezom, s prepoznano poškodbo analnega sfinktra ob porodu ali operacijo na perineju, z anamnezo iritabilnega kolona ali drugih vnetnih črevesnih bolezni.
Vse bolnice so izpolnile strukturirani vprašalnik, ki je vseboval vprašanja o fekalni urgenci ter inkontinenci vetrov, tekočega ali trdega blata pred porodom in 6 tednov po porodu. Fekalno urgenco smo opredelili kot nezmožnost zadrževanja blata več kot 5 minut. Inkontinenco smo opredelili kot nezmožnost ali zmanjšano možnost kontrolirati odvajanje vetrov, tekočega ali trdega blata.
Drugi ali tretji dan po porodu smo bolnice pregledali z rotirajočo 7 MHz sondo, ki omogoča 360-stopinjsko sliko. S sondo smo poiskali začetek mišice puborectalis, ki ima ultrazvočno obliko črke U. Nato smo sondo počasi izvlekli proti anusu vzdolž analnega kanala in ocenili ultrazvočno sliko mišice puborectalis, notranjega analnega sfinktra, longitudinalne mišice in zunanjega analnega sfinktra. Notranji analni sfinkter se kaže kot uniformni hipoehogeni obroč, ki ga obdaja heterogen hiperehogeni obroč mišic zunanjega analnega sfinktra. Poškodba zunanjega analnega sfinktra se kaže kot hipoehogena razpoka v obroču različne širine, ki se ob želeni kontrakciji še dodatno poveča. Poškodba notranjega analnega sfinktra se kaže kot razpoka v hipoehogenem obroču.
Vse bolnice smo 6 tednov po porodu poklicali po telefonu in skupaj z njimi ponovno izpolnili vprašalnik.
Porode so vodile babice po standardnih protokolih za aktivno vodenje poroda, ki veljajo v porodnišnici Ljubljana. Vse epiziotomije so bile mediolateralne. Podatke o nosečnosti in porodu smo s privolitvijo bolnic pridobili iz porodnega zapisnika. Analizirali smo uporabo obporodne analgezije, sprožitev in pospeševanje poroda z zdravili, razliko indeksov telesne teže (BMI) bolnic pred nosečnostjo in pred porodom, trajanje poroda, porodno težo in obseg glavice otrok ter starost prvorodk.

Rezultati

Pri ultrazvočni preiskavi smo odkrili poškodbo analnega sfinktra pri 12 (46 %) od 26 bolnic.

Vse so imele poškodovan samo zunanji sfinkter.
Nobena od bolnic pred porodom ali po njem ni navajala novo nastalih težav z zadrževanjem vetrov ali blata oziroma poslabšanja tovrstnih težav (Tab. 1).
Tudi za uporabo analgezije, stimulacije, vakuumske ekstrakcije in epiziotomije razlike niso bile statistično značilne.
Nakazuje se, da verjetno obstajajo razlike glede na starost. Toda razlika je zaradi majhega števila bolnic še vedno statistično nepomembna.

Zaključki

Z našo raziskavo smo dokazali, da je pogostnost prikritih poškodb analnega sfinktra v Porodnišnici Ljubljana podcenjena, saj smo kljub majhnemu številu vključenih porodnic tovrstne poškodbe ugotovili pri 12 od 26 porodnic. Zaradi majhnega števila primerov nismo uspeli natančno opredeliti vloge posameznih dejavnikov tveganja za poškodbe. V vseh analiziranih primerih so razlike zaradi premajhnega števila bolnic statistično neznačilne. Vse bolnice so bile po porodu brez simptomov, vprašanje pa je, koliko jih ima težave kasneje v življenju.

Ključne besede *prikrite poškodbe analnega sfinktra; incidenca; dejavniki tveganja; epiziotomija*

Abstract

Background

Vaginal delivery is the most important risk factors for development of faecal incontinence, which significantly affects quality of life. Foreign studies show OASIS occur at 20 to 40 % of vaginal deliveries. In Slovenia we recognize sphincter injuries at 1.7 % of deliveries, while true incidence of OASIS in our population remains unknown. Caesarean section prevents anal sphincter injuries. Known risk factors in foreign studies include prolonged second stage of labour, fetal weight > 3500 g, malpresentation, forceps delivery, maternal age more than 35 years at the time of first delivery, first delivery. Few women complain about defecatory problems in puerperium unless they are directly asked about them, so true incidence of such injuries is grossly underestimated. Previously compensated anal sphincter dysfunction can clinically manifest as late as in menopause. The most probable cause is atrophy of muscle and fibrous tissue of pelvic floor and anal sphincter due to lack of estrogen support in this period.
With anal ultrasound we tried to determine the incidence of occult damage to anal sphincter in primiparas after vaginal delivery and the relation of injury to symptoms 6 weeks after delivery and identify possible risk factors in our population. We also tried to find out how many patients with anal sphincter injury become symptomatic immediately after delivery.

Methods

From January to June 2009 we examined 26 primiparas after vaginal delivery in the Ljubljana Maternity Hospital with anal ultrasound and compared various data about the delivery from our national delivery form. We excluded all patients with caesarean section, recognized anal sphincter injury at the time of the delivery or previous anorectal surgery, history of irritable bowel syndrome or pre-existing inflammatory bowel disease. All patients completed a bowel-function questionnaire, which included questions about faecal urgency and involuntary passing of gas, liquid or solid stools, before and six weeks after delivery. Faecal urgency was defined as inability to hold passing of stools for more than 5 minutes, anal incontinence as partial or complete inability to control passing of winds, liquid or formed stools.
Patients were examined with 7 MHz 360-degrees rotating probe on the second or third day after delivery. With the probe we identified the U-shaped puborectalis muscle, then slowly extracted the probe through the anal canal towards the anus. We examined ultrasound image of puborectalis muscle, internal anal sphincter, longitudinal muscle and external anal sphincter. Internal anal sphincter (IAS) appears as a uniform hypoechoic circle, which is surrounded by heterogenous hyperechoic circle of external anal sphincter (EAS). External anal sphincter defect was defined as hypoechoic gap of various size in hyperechoic circle, that enlarges with voluntary contraction. Internal anal sphincter defect was defined as a gap in hypoechoic circle.
All patients were contacted by telephone 6 weeks after delivery to complete the same questionnaire again.
Deliveries were managed by midwives according to standard active delivery management protocols the Ljubljana Maternity Hospital. All episiotomies were mediolateral. Information about pregnancy and delivery was obtained with patient's consent from national delivery

forms. We analysed use of analgesia at the delivery, induction and stimulation of labour, difference in body mass index (BMI) before pregnancy and before the delivery, duration of labour, fetal weight and head circumference and maternal age.

Results *We found signs of external anal sphincter injury in 12 (46 %) out of 26 patients examined, all of them had only external sphincter injury.*
None of them had any de novo symptoms regarding defecation or problems restraining winds or stool 6 weeks after delivery (Table 1).
There was no significant statistic difference for use of analgetics, stimulation of labour, vacuum extraction and episiotomy. There might be a difference in maternal age, but data was insufficient due to small number of patients.

Conclusions *With our research we showed that incidence of sphincter injuries at vaginal delivery in our hospital is underestimated, as we found occult anal sphincter injury in 12 out of 26 patients. The number of patients was small so we were not able to estimate the importance of various possible risk factors for OASIS. All analysed cases showed no significant statistic difference due to small number of patients in the study. All patients were asymptomatic 6 weeks after delivery, but how many of them develop symptoms in later life remains unknown.*

Key words *occult anal sphincter injuries (OASIS); incidence; risk factors; episiotomy*

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Tab. 1. *Rezultati raziskave – primerjava možnih dejavnikov tveganja med skupinama z rupturo sfinktra ali brez.*

Table 1. *Results – comparison of probable risk factors in group with or without sphincter injury.*

	Poškodba sfinktra Visible sphincter defect	N	Povprečje Average	P
Obseg glave ploda Head circumference	Da Yes	12	35,167	0,551
	Ne No	14	34,821	
Razlika BMI pred nosečnostjo in pred porodom BMI difference before pregnancy and before delivery	Da Yes	12	5,600	0,304
	Ne No	14	5,023	
Starost prvorodke Maternal age	Da Yes	12	31,08	0,032
	Ne No	14	27,79	
Teža ploda Fetal weight	Da Yes	12	3582,50	0,170
	Ne No	14	3339,64	
Ure trajanja poroda Duration of delivery (hours)	Da Yes	12	4,67	0,809
	Ne No	14	4,50	