Egyptian Journal of Anaesthesia 34 (2018) 67–69

HOSTED BY

Contents lists available at ScienceDirect

Egyptian Journal of Anaesthesia

journal homepage: www.sciencedirect.com

Case report

Red herring: Acute back pain after combined spinal epidural for labor analgesia

Yoong Chuan Tay *, Kian Hian Tan

Department of Anaesthesiology, Singapore General Hospital, Block 5 Level 2, Outram Road, Singapore 169608, Singapore

ARTICLE INFO

Article history:
Received 25 July 2017
Accepted 10 August 2017
Available online 24 August 2017

Keywords:
Symphysis pubis diasthesis
Pubic symphysis diasthesis
Post-epidural pain
Labor epidural pain
Post-partum pain

ABSTRACT

Symphysis pubis diastases complicate 1:300 to 1:30,000 pregnancies. Peripartum pain in chronological sequence with labor epidural analgesia often attracts instinctive causation and distress. Predisposing risk factors include macrosomia, short second stage of labor, forceps use, multiparity, small pelvis, intense uterine contractions, previous pelvic ring pathology and trauma. A gestational diabetic primigravid parturient presents with acute post-partum back pain after an uneventful analgesic labor epidural. Her pain distributed over the right paravertebral L5-S1 region without radiculopathy, worsened with positional change and accompanied by urinary incontinence, precluding child care. Spine imaging incidentally revealed a 38 mm symphysis pubis diastasis. A pelvic binder by orthopaedics aided physiotherapy and ambulation. Pubic diastases are usually conservatively managed, unless separation exceeds 5 cm when early surgery may improve functional outcomes. Although symptoms may recur in subsequent pregnancies, it does not preclude vaginal delivery. Early recognition and prompt management aim to reduce parturient morbidity and promote resumption of activity.

1. Introduction

Acute back pain following labor epidurals has haunted anesthesiologists with fear of procedure related complications including epidural or spinal haematoma, infections with discitis, osteomyelitis, psoas or sacroiliac abscesses and nerve injuries. Peripartum pain in chronological sequence with labor epidural analgesia often attracts instinctive causation and distress; both to the parturient and anesthetist. A peripartum symphysis pubis diasthesis, an uncommon albeit not a rare cause, is the feature of this case report. Symphysis pubis diastases complicates 1:300 to 1:30,000 pregnancies. Predisposing risk factors include macrosomia, short second stage of labor, forceps use, multiparity, small pelvis, intense uterine contractions, previous pelvic ring pathology and trauma (see Figs. 1–3).

2. Case report

We present a 40-year old, 152 cm, gestational diabetic primigravid parturient with distressing acute back pain after delivery of a macrosomic baby at 37 + 6 weeks of pregnancy. She had previous history of left ovarian cystectomy 10 years ago with diet-controlled gestational diabetes during her current IVF pregnancy. Fetal growth scans at 21 and 31 weeks were normal but at 36 + 6 weeks showed polyhydramnios and fetal macrosomia (EFW 3.6 kg). Blood investigations were normal. Combined spinal epidural (CSE) analgesia was given to provide rapid onset of analgesia for her labor pain after use of Entonox. CSE insertion (18G Tuohy needle with 27G Whitacre spinal needle, 22G epidural catheter) was inserted uneventfully. Her labor lasted for 4 h with a second stage of 60 min. During delivery, her obstetrician required a Neville-Barnes forceps in a lithotomy position. A baby boy was delivered with caput succedaneum, forceps marks over cheeks. The epidural catheter was removed after delivery. She reported a severe hammer-like pain over her lower back the following morning, worsened by transition from supine to sitting and was unable to stand nor ambulate without assistance by two nurses precluding child care. Urinary incontinence accompanied intense pain episodes. There was no pain at rest. Her pain was noted over the L5 and S1 region on the right, however not radicular in nature. There were no overlying skin changes nor trigger points. An MRI to rule out an epidural hematoma was ordered, but declined by patient citing financial concerns, and upon a review by the Orthopaedics team, a lumbosacral spine X-ray was performed. Her analgesia included oral tramadol, Anarex (paracetamol and orphenadrine

Peer review under responsibility of Egyptian Society of Anesthesiologists.
* Corresponding author.
E-mail addresses: yoong.chuan@gmail.com (Y.C. Tay), tan.kian.hian@singhealth.com.sg (K.H. Tan).

http://dx.doi.org/10.1016/j.egja.2017.08.002
1110-1849/

Fig. 1. Pelvic X-ray on presentation.

Fig. 2. Pelvic X-ray after 2 months.

Fig. 3. Pelvic X-ray after 4 months.

citrate) with ketoprofen patch to complement intramuscular pethidine. Physiotherapy was prescribed for mobilization exercises post-partum.

A significant pubic symphysis widening of 41 mm on the lumbar AP film, in addition to widened sacroiliac joints, but otherwise normal lumbar intervertebral spaces was reported by the radiologist. A pelvic binder was applied which complemented physiotherapy sessions to enable slow mobilization with the aid of a walking frame. She was keen to return home and was discharged with an orthopedic and pain clinic follow-up.

X-rays done on follow up revealed diastasis gap of 20.26 mm at two months and 19.8 mm at 4 months with resolution of symptoms.

3. Discussion

Peripartum symphysis pubis diasthesis has inconsistent definitions and sporadic reporting prevent an accurate estimate of incidence. Reported incidence vary from one in 300 to one in 30,000 deliveries [1–5].

The pubic symphysis is a cartilaginous joint connected by superior pubic ligaments stretching to the pubic tubercles, and inferiorly by the arcuate pubic ligaments on its lower borders blending with the interpubic disc. The adjacent symphysial bone surfaces are firmly linked by a thin layer of hyaline cartilage with a connecting fibrocartilage varying in thickness in different subjects, presenting a theoretical resistance to shearing forces [6].

In a non-pregnant woman, the normal symphysis gap is 4–5 mm, which increases in pregnancy by at least 2–3 mm [7].

Historically, symphyseal separation has been frequently unrecognized, especially for assisted vaginal delivery under epidural anaesthesia [3].

Risk factors for diasthesis include a large infant, a small pelvis, a rapid second stage of delivery, intense uterine contractions, application of forces to abduct the thighs, forceps delivery, previous pelvic ring pathology or trauma and multiparity [1,8].

Hence, entertaining a high index of suspicion and observation for clinical clues for diagnosis are paramount to diagnose the diasthesis during various stages of parturition.

Peripartum, episodes of breakthrough pain maybe experienced despite adequate epidural analgesia [3]. During the birth, a 'give' may also be felt [9].

Post partum, a flattened abdominal contour, pain located in the hips or sacral region potentiated by walking and weight-bearing, urine incontinence when changing position from supine/prone to upright or a waddling gait maybe observed [8].

A temporal delay of 24 h or more could ensue before the pain is noticed [8]. Postoperative sacroiliac, suprapubic or thigh pain maybe experienced secondary to pubic separation [3,10]. Limitation of movement in bed as pain could be precipitated by turning in bed which wakes some women up at night [1]. Radiation of pain to the sacroiliac joints and shooting pain down the buttocks and legs along areas supplied by the pudendal and genitofemoral nerves, have been described to be initially mistaken for neurological complications of labor epidural analgesia [5].

On examination, pain maybe elicited by bilateral pressure on the trochanters or hip flexion with legs in extension. Rarely, even a palpable groove at the pubic symphysis may be detected on internal or external examination [1].

The diagnosis of diastasis is based on symptoms persistence and a separation of more than 10 mm [2,7]. However, the amount of diasthesis does not always correlate with the severity of symptoms or disability. In a study, X-rays of pelvis and lower spine, magnetic resonance imaging, urine dipstick and blood tests (including erythrocyte sedimentation rate, C-reactive protein, rheumatoid factor, antinuclear antibodies) in women with transient and persistent pelvic joint pain, were not found to be diagnostically useful [11].

Although patients often respond to conservative measures, a small percentage of patients will develop chronic pain and require surgical treatment, which involves debridement or fusion of pubic symphysis [10].

Conservative measures used include pelvic stabilization and bed rest [9,12]. Pelvic support with a brace or girdle, ambulation with a walker or crutches and a graded exercise protocol were amongst standard conservative treatment [13]. Effective pharmacological treatment includes non-steroidal anti-inflammatory medication, opiates and intra-symphyseal injections [1].

Pain usually resolves within a month although the pelvis usually returns to normal by 4–12 weeks postpartum [14,15]. A marker of delayed recovery suggested include a large sonographically measured interpubic gap greater than 21 mm [16]. Patients should be aware that symptoms may recur in subsequent pregnancies, which may worsen, though this does not preclude vaginal delivery [1,17].

Early recognition and treatment would aim to avoid major functional difficulties and improve quality of life in mothers.

Conflict of interest

The authors declared that there is no conflict of interest.

References

[1] Snow RE, Neubert GA. Peripartum pubic symphysis separation: a case series and review of the literature. Obstet Gynecol Survey 1997;52(7):438–43.
[2] Aslan E, Fynes M. Symphysial pelvic dysfunction. Curr Opin Obstet Gynecol 2007;19:133–9.
[3] Musumeci R, Villa E. Symphysis pubis separation during vaginal delivery with epidural anesthesia. Case report. Reg Anesth 1994 Jul–Aug;19(4):289–91.
[4] Dunivan GC, Hickman AM, Connolly A. Severe separation of the pubic symphysis and prompt orthopedic surgical intervention. Obstet Gynecol - Aug 2009; 114(2 Pt 2); 473–5.
[5] Moral TM, Ruiz AR, Alonso MM. Two cases of postpartum pubis diastasis mistaken for neurological complications of epidural analgesia. Rev Esp Anestesiol Reanim 2004 Oct;51(8):448–51.
[6] Williams PL, Warwick R. Arthrology. In: Williams PL, Warwick R, editors. Gray's anatomy. Edinburgh: Churchill Livingstone; 1980. p. 475.
[7] Parker JM, Bhattacharjee M. Images in clinical medicine. Peripartum diastasis of the symphysis pubis. N Engl J Med 2009;361:1886.
[8] Spaeth DG. Observatory clues to aid in the diagnosing of diastasis symphysis pubis: an underreported complication of parturition. J Am Osteopath Assoc 1997;97(3):152–5.
[9] Nouta KA, Van Rhee M, Van Langelaan EJ. Symphysis rupture during partus. Ned Tijdschr Geneeskd 2011;155:A2802.
[10] Dunbar RP, Ries AM. Puerperal diastasis of the pubic symphysis. A case report. J Reprod Med 2002;47(7):581–3.
[11] Hansen A, Jensen DV, Larsen EC, et al. Postpartum pelvic pain–the "pelvic joint syndrome": a follow-up study with special reference to diagnostic methods. Acta Obstet Gynecol Scand 2005;84:170.
[12] Nitsche JF, Howell T. Peripartum pubic symphysis separation: a case report and review of the literature. Obstet Gynecol Surv 2011;66(3):153–8.
[13] Jain N, Sternberg LB. Symphyseal separation. Obstet Gynecol 2005;105:1229.
[14] Albert HB, Godskesen M, Westergaard JG. Incidence of four syndromes of pregnancy-related pelvic joint pain. Spine (Phila Pa 1976) 2002;27:2831.
[15] Elden H, Hagberg H, Olsen MF, et al. Regression of pelvic girdle pain after delivery: follow-up of a randomised single blind controlled trial with different treatment modalities. Acta Obstet Gynecol Scand 2008;87:201.
[16] Scriven MW, Jones DA, McKnight L. Current concepts review. Musculoskeletal considerations in pregnancy. J Bone Joint Surg Am 1995;77:1465.
[17] Culligan P, Hill S, Heit M. Rupture of the symphysis pubis during vaginal delivery followed by two subsequent uneventful pregnancies. Obstet Gynecol 2002;100:1114.