

Trevor Silver Memorial Essay competition

Applicants are invited to submit an essay in the region of 2500 words on the subject of musculoskeletal medicine in primary care. Some examples would be a case presentation with discussion or an audit or description of a new service or skill that has been developed.

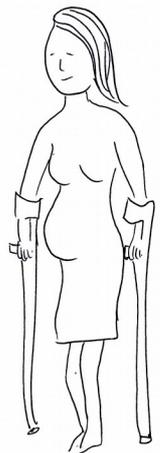
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The Beached Whale

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In she hobbled. Her husband had driven her here and dropped her at the surgery entrance, and she had just about managed, slowly, and with the aid of two crutches, to pull herself into my consultation room. Juliet (not her real name) was a 39 year old lady with a history of high achievement. She had run the London marathon as a university student raising significant amounts of money for local charities during her university years. She now kept herself fit and healthy by regularly attending the gym, cycling and swimming as well as backpacking treks with her husband. She didn't smoke, she didn't drink alcohol, her BMI was ideal, but over the past 4 months her mobility had been decreasing steadily bringing her to her current state. She was, as her friends jeered, a 'beached whale'; spending her days and nights lying on the sofa or bed, only getting up when absolutely necessary. She could no longer climb stairs or even crawl on the floor. She rolled over in bed with a yelp, and when out of doors was reliant on others to push her in a wheelchair, or otherwise could manage very limited distances with the crutches. So what was it that laid a previously fit and well young lady down like this? Not accident nor injury, not infection nor dysfunction, simply pregnancy. She was 28 weeks pregnant and suffering from the poorly understood condition known as pregnancy-related pelvic girdle pain (PPGP).



Juliet's first pregnancy at the age of 34 years went smoothly; she walked an hour to and from work each day until the second trimester, then slowed down a bit, wearing a pelvic support belt from 34 weeks gestation for comfort, and enjoyed a spontaneous vaginal delivery at home. The second pregnancy was also straight-forward; she walked with the pelvic support belt from 28 weeks gestation that time, and carried around a lumbar support cushion for use when sitting. Labour was induced at 40 weeks for prolonged rupture of membranes, using iv oxytocin (syntocinon) which resulted in a hyperstimulated very painful delivery. Juliet recovered well though, and within three months was able to walk several miles carrying her new baby in a sling. With the third baby, Juliet started having lower back pains from about 10 weeks gestation. By 28 weeks she was unable to work any longer due to severe pain on walking and difficulty getting to her first floor office. She saw an NHS physiotherapist at this point who offered her crutches and said there wasn't anything more they could offer. Juliet then saw a private physiotherapist who suggested a Dynair water cushion for the car, and gave general advice on how to turn in bed etc. There was no follow-up and

Juliet suffered at home for several weeks. She had a vaginal delivery in hospital that was induced at 42 weeks as she hadn't gone into spontaneous labour (presumably due to her immobility). Thankfully, she was up on her feet again fairly soon after giving birth, and although had a fair amount of ongoing pain she returned to work after 6 months, and managed well, being able to walk about 2-3 miles pushing the baby in a buggy. No sling this time, and no ability to run, but not in bad shape overall.

Now in a fourth pregnancy within a five year period Juliet was in dire straits. By 8 weeks gestation she had required crutches again and by 15 weeks she was up all night crying with severe pains. By 20 weeks she could only walk very small distances despite the aid of the crutches. She saw a private physiotherapist twice who manipulated the sacro-iliac joints which provided good relief, but only for a few days. She also saw the Senior Obstetric Physiotherapist attached to her maternity unit who performed further manipulations, and advised her to rest the pelvis as much as possible. Workplace adaptations had been put into place but the pain and immobility had worsened to such an extent that she had to leave work three months before her due date. Being the main earner, going off work this early meant significant financial strain for her, her husband and their children.

Her questions to me, her GP, were:

1. Is there anything that can be done to alleviate, or manage this pain?
2. If not, are there any ways that you suggest help me endure the pain?
3. How bad can this condition get, will it simply keep worsening? How will I be in another three months time? How will I cope?
4. Why me? All the pregnant women I know are waltzing around with ease.
5. Will I ever get better, or does this result in permanent damage?

I felt completely unprepared for this consultation, and inadequate in both my knowledge and experience of what was going on. However I was sufficiently moved by Juliet's anguish and desperation, and struck by her lack of support so far, that I felt the need to research the topic. Subsequently this essay resulted...

Pregnancy-related Pelvic Girdle Pain (PPGP)

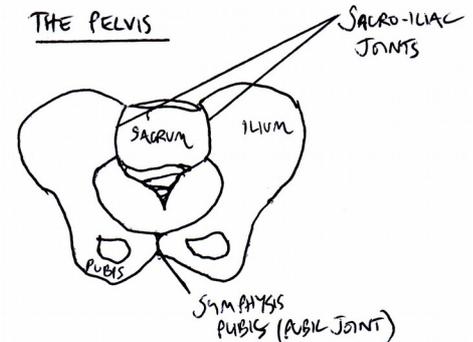
PPGP is a pregnancy related condition which causes pain in one or more joints of the pelvis and consequent difficulty walking that can be disabling¹. PPGP was coined as a term in 2005 to describe the experience of pain between the posterior iliac crest and the gluteal fold (ie over the sacroiliac joints), and/or pain over the symphysis pubis (which used to be referred to as symphysis pubis dysfunction). Pain over the sacro-iliac (SI) joints radiates to the buttocks and thighs, while pain over the symphysis pubis radiates to the vulva and inner thighs. PPGP is classically worst when walking or weight bearing on one leg, but sitting (especially in a car or other cramped environment) and sexual intercourse may exacerbate the pain also. Signs on clinical examination include antalgic gait, tenderness and/or erythema over the affected joints².

Many doctors perceive pelvic pain to be 'expected' during pregnancy and as such often offer few solutions and little recognition³. Sufferers however can experience considerable disability² that

affects their quality of life, work productivity, sexual satisfaction, as well as their enjoyment of pregnancy and motherhood as they struggle to bond with a baby that caused them so much pain. PPGP affects up to 25% pregnant women to some extent⁴.

The exact mechanisms that cause PPGP are multifactorial, and in many cases unclear⁵.

- The pelvis transmits vertical forces from the spine to the legs making the stability of the SI and pubic joints crucial for successful locomotion⁶. Increased movement of the SI and pubic joints along with progressive lordosis of the lumbosacral spine are normal physiological adaptations of the musculoskeletal system to pregnancy, and it is thought that the pressure of these changes, when not sufficiently counteracted by the pelvic floor and abdominal muscles leads to PPGP.
- The hormonal effects of relaxin and progesterone on the pelvic ligaments are thought to loosen the joints, with subsequent laxity resulting in instability of the pelvis (and therefore difficulty walking) along with pain.
- Neuromotor control systems are thought to play a part but again are poorly understood.
- Neuromodular processing of pain is also thought to be contributory.



Despite considerable clinical interest, the physiological processes characterising PPGP remain obscure⁵, with risk factors for developing PPGP including both physical and psychosocial factors⁷:

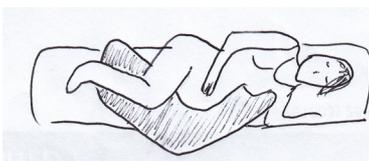
- Multiparity
- Strenuous physical activity (twisting or bending the back several times an hour)
- History of lower back pain or trauma to back or pelvis
- Previous PPGP
- Previous difficult delivery
- A professional education or self-reported stress
- Poor relationship with spouse

Perhaps surprisingly the following factors are not thought to play a role⁷:

- Time interval since last pregnancy
- Maternal age
- Maternal body mass index
- Fetal weight
- Bone density

Treatment options for PPGP

1. Bed rest and symptomatic care appear to be the mainstay of PPGP therapy¹. Advice on sleeping position or use of a 'banana pillow' can be helpful.



A supportive belt worn at the level of the anterior superior iliac spines can increase pelvic stability and thereby increase walking distance. Mobility aids such as crutches, zimmer frames or wheelchairs may be required in severe cases.

2. Physical or manual therapy performed by a specialist physiotherapist, osteopath, or chiropractor can be very effective. This may involve manipulation of one or both of the SI joints. In addition pelvic tilt exercises with advice on avoidance of exacerbating movements such as stair climbing is beneficial.
3. A massage therapist can help to treat tight over-active buttock muscles, or this can be done at home by a partner.
4. There appears to be little that the obstetrician can offer as there is no evidence at present that a caesarean section results in a more rapid recovery or conveys any advantage to women with PPGP⁸. Labour should occur as normal but avoiding lithotomy position or squatting, both of which can aggravate PPGP and result in increased post-partum symptoms. The recommended positions for labour are all four kneeling or lying laterally with the upper leg supported.
5. Pain management from an appropriately trained Clinical Psychologist can be extremely therapeutic^{9,10}.
6. GP care co-ordination is crucial to provide sign-posting to the above agencies and to provide ongoing support to the mother that will continue after the delivery. The GP should also consider prescription of analgesia, as well as prophylactic clexane if immobile. A sick note may be required.
7. There are a few voluntary agencies that help provide information and support regarding PPGP. Such organisations include the pelvic partnership¹¹ and the pelvic instability network¹².
8. If PPGP is long-standing (persisting beyond pregnancy), and very severe, surgical arthrodesis can be considered as a procedure of last resort⁶.



Post-partum Prognosis

In 90% of women who experience PPGP, symptoms resolve completely within 6 months of delivery. However at two years post-partum there are still 8% of women who feel pelvic girdle pain¹³, and in some this pain turns into a severe chronic disabling pain syndrome that is very difficult to manage.

Risk factors associated with the development of ongoing symptoms include^{5,7}:

- Multi-parity
- Onset of pain at early gestation
- Pain in all three of the pelvic joints
- Severe symptoms during the pregnancy
- Previous pain condition, anxiety or depression
- Poor socio-economic status or non-supportive partner

Understanding this, it is important that advice is given to the woman regarding ways and means to maximise chances of full and fast recovery soon after delivery. That advice includes recommendation to avoid all aggravating activities until symptoms have completely subsided. Physiotherapeutic advice should be offered regarding exercises to improve core stability as these are known to be effective in reducing morbidity^{14,15}. Pulsed short-wave therapy can be offered which is often very effective in reducing inflammation¹⁶.

The European guidelines for PPGP do recommend that analgesia should be prescribed as required for pain relief¹⁷, and once the baby is delivered the GP will be at liberty to do this with greater freedom than when her suffering was at its worst. However analgesia must be used with caution as both opiates and NSAIDS are known to contribute to the development of chronic pain syndrome¹⁸. In addition analgesia, although possibly very effective in reducing pain in the short-term, may result in the woman performing more aggravating activities and thereby unwillingly exacerbating her condition.

Conclusion

So back to Juliet; she got through the remainder of her fourth pregnancy lying in bed. She was unable to care for herself or her children at all during that time. By the end of the pregnancy she required assistance to transfer and a bedside commode. Obstetrics agreed to free her from pregnancy by inducing labour at 39 weeks. At her six week post-partum check with me the first thing she asked was “Doctor, doctor, how soon can I be sterilised? The temptation of resuming sex looms... Please help me!”

References

1. Sarıkaya, E., Yılmaz, S. & Okumuş, M. Pregnancy - Related Pelvic Girdle Pain. *Gynecol. Obstet. Reprod. Med.* **20**, (2016).
2. Hansen, A. *et al.* Symptom-giving pelvic girdle relaxation in pregnancy. II: Symptoms and clinical signs. *Acta Obstet. Gynecol. Scand.* **78**, 111–115 (1999).
3. Verstraete, E. H., Vanderstraeten, G. & Parewijck, W. Pelvic Girdle Pain during or after Pregnancy: a review of recent evidence and a clinical care path proposal. *Facts Views Vis. ObGyn* **5**, 33–43 (2013).
4. Wu, W. H. *et al.* Pregnancy-related pelvic girdle pain (PPP), I: Terminology, clinical presentation, and prevalence. *Eur. Spine J.* **13**, 575–589 (2004).
5. Kanakaris, N. K., Roberts, C. S. & Giannoudis, P. V. Pregnancy-related pelvic girdle pain: an update. *BMC Med.* **9**, 15 (2011).
6. Foley, B. S. & Buschbacher, R. M. Sacroiliac joint pain: anatomy, biomechanics, diagnosis, and treatment.

- Am. J. Phys. Med. Rehabil.* **85**, 997–1006 (2006).
7. Albert, H. B., Godskesen, M., Korsholm, L. & Westergaard, J. G. Risk factors in developing pregnancy-related pelvic girdle pain. *Acta Obstet. Gynecol. Scand.* **85**, 539–544 (2006).
 8. Mogren, I. M. Does caesarean section negatively influence the post-partum prognosis of low back pain and pelvic pain during pregnancy? *Eur. Spine J.* **16**, 115–121 (2006).
 9. Gatchel, R. J., McGeary, D. D., McGeary, C. A. & Lippe, B. Interdisciplinary chronic pain management: past, present, and future. *Am. Psychol.* **69**, 119 (2014).
 10. Jensen, M. P. & Turk, D. C. Contributions of psychology to the understanding and treatment of people with chronic pain: Why it matters to ALL psychologists. *Am. Psychol.* **69**, 105 (2014).
 11. Pelvic Partnership: information about Pelvic Girdle Pain (PGP): www.pelvicpartnership.org.uk
 12. PINS charity supporting people with Pelvic Girdle Pain/Symphysis pubis dysfunction (SPD): www.spanglefish.com/pins/pelvicgirdlepain.asp
 13. Albert, H., Godskesen, M. & Westergaard, J. Prognosis in four syndromes of pregnancy-related pelvic pain. *Acta Obstet. Gynecol. Scand.* **80**, 505–510 (2001).
 14. Stuge, B., Laerum, E., Kirkesola, G. & Vøllestad, N. The efficacy of a treatment program focusing on specific stabilizing exercises for pelvic girdle pain after pregnancy: a randomized controlled trial. *Spine* **29**, 351–359 (2004).
 15. Powell, W. Diastasis, Core & Pelvic Floor Exercises For Women | MuTu System: mutusystem.com
 16. Kerem, M. & Yigiter, K. Effects of continuous and pulsed short-wave diathermy in low back pain. *Pain Clin.* **14**, 55–59 (2002).
 17. Vleeming, A., Albert, H. B., Östgaard, H. C., Sturesson, B. & Stuge, B. European guidelines for the diagnosis and treatment of pelvic girdle pain. *Eur. Spine J.* **17**, 794–819 (2008).
 18. Gilron, I., Jensen, T. S. & Dickenson, A. H. Combination pharmacotherapy for management of chronic pain: from bench to bedside. *Lancet Neurol.* **12**, 1084–1095 (2013).