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POSTPARTUM DIASTASIS SYMPHYSIS PUBIC : A CASE STUDY

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Abstract

Introduction: Pubic symphysis diastasis is the weakness of the ligaments in the pubis that causes the separation of the pubic bone due to hormonal or normal delivery of a baby that is too large (Naoum, & Garner, 2003). Incidence of cases like this is rare but as reported prevalence in a year can reach 520 to 20,000 per case.
Case Presentation: A 25-year-old woman has achieved HPL and delivered normally or spontaneously, then the patient was diagnosed with Diastasis Symphysis Pubis with a distance of 3.42 cm.
Management and Outcome: The management is in the form of Tens,mobilization exercises, pain reduction and pelvic floor exercises to reduce the level and intensity of pain, increase muscle strength and increase joint range of motion and restore functional ability.
Discussion: pubic symphysis instability can lead to joint inflammation, leading to difficulties in outpatient care. Severe dilation of the pubic symphysis damages the ligaments associated with the bones of the bones. If the distance between the symphysis pubis is greater than 2 cm on radiographs, involvement of the sacroiliac joints is often seen. In our research,
almost half (16/33, 48.5%) of patients with PPSD had a pubic symphysis dilation of more than 2 cm according to (Sung et al., 2021), in this case study the patient had a pubic width of 3.42 Cm but after doing a physiotherapy program 2 times a week at the hospital for 3 days and doing the exercises at home to get results for approximately 3 months decreased to 1.85 Cm.
Conclusion: handling of Physiotherapy programs given to patients 2 times a day for mobilization exercises and pelvic floor exercises in order to prevent joint stiffness and decrease in abdominal and pelvic muscle strength.
Keyword: Pubic Symphysis Diastasis, TENS, Mobilization Exercises, Pelvic Floor Exercise

Introduction

Diastasis Symphysis Pubic is an abnormal condition and instability in the pubic joint or pubic symphysis which causes pain and decreased muscle strength resulting in limited activity and function (Sung et al., 2021). Pubic symphysis diastasis can also be defined as inflammation or tenderness of the ligaments of the pubic symphysis and affecting the pubic joint to stretch (Wellock & Crichton, 2007). This condition allows excessive movement towards the lateral or anterior symphysis pubis, this is associated with the process of pregnancy and childbirth. According to reported prevalence varying from one in four women affected at different rates, then 1 in 300 pregnancies to 1 in 30,000 pregnancies, regional variations in prevalence have been noted, with reported rates in Norway as high as 37.5% (Khorashadi, 2011).

Some of the symptoms in this case are pain around the symphysis pubis, radiating to the lower abdomen, pelvis, groin, thighs to legs, and pain when moving, especially when walking (because of holding weight in the pelvis), when sitting is very painful and even gets up. from bed and standing, tenderness around the sacroiliaca that limits activity and function (Howell, 2012). This pubic symphysis diastasis also undergoes widening in the anatomical system that forms the pubic symphysis that occurs during pregnancy or postpartum. This event can lead to excessive separation of the pubic symphysis as most women have a greater thickness of the fibrocartilaginous disc which allows more hip mobility thereby providing a larger pelvic diameter to facilitate labor, this refers to pain associated with labor or instability. pelvis after delivery (Gräf, 2014).

Problems that arise in cases of pubic symphysis diastasis are pain around the pelvis, limitation of motion in the right or right hip joint, and a decrease in abdominal muscle strength, pelvic or pelvic muscles and limitations in activity and functional ability.

The role of physiotherapy in cases of pubic symphysis diastasis to reduce pain by giving Transcutaneous Electrical Nerve Stimulation (TENS) is used to reduce the pain suffered by a person, especially pain and Transcutaneous Electrical Nerve Stimulation (TENS) works to stimulate or stimulate through the skin to nerve fibers peripherals to control pain (Gabriel, 2015). Increasing motion in the hip joint by doing mobilization exercises so that there is no stiffness or limitation in the joints so that they can be moved slowly (Norvilaite et al., 2020), as well as

maintaining abdominal and pelvic muscle strength with Pelvic Floor exercises in the form of Kagel's Exercise can strengthen the muscles of the hips. muscles around the reproductive organs and improve muscle tone around the reproductive organs. Pelvic floor muscle exercises help increase the tone and strength of the urethral and periurethral striated muscles, and should be performed during pregnancy and after delivery to help the pelvic muscles return to normal function (Harvey, 2003).

Case Presentation

A patient or G3P2A0, 38 years old, 40 weeks pregnant, complains of contractions, and the fetus looks big or at term (a baby born in normal time) a few hours later giving birth spontaneously. After giving birth, the baby's weight was too large, causing the pubic area and around the hips and legs to be immobile. The patient was admitted to the hospital after three days after returning home, after being given a dose of medication by the doctor, given pain relief but it disappeared but reappeared and the hip joint and The hip still couldn't be moved, then the complaint didn't improve, so the doctor on the ward was referred to Physiotherapy. The patient feels uncomfortable when tilting right and left, sitting, standing and even walking, the patient still has difficulty doing it independently. Then physiotherapy while the patient is being treated visits the room and sees the condition and is given exercises and education and when at home it is recommended to always wear a hip belt. Thus the patient has been given drugs and underwent physiotherapy.

Personal patient history, patient a private employee later when pregnant or approaching HPL has applied for leave and is temporarily at home until the time of delivery, when the patient gives birth and is born spontaneously or normally, the baby in the fetus turns out to be too big, causing stretching in the symphysis pubis area .

The goals to be achieved are reducing the pain felt by the patient, increasing the limited range of motion of the joints, increasing muscle strength and increasing daily activities in household and work activities.

Management and Outcome

Patients undergo a physiotherapy program in the form of giving Transcutaneous Electrical Nerve Stimulation (TENS) used to reduce the pain suffered by a person, especially pain and Transcutaneous Electrical Nerve Stimulation (TENS) works to stimulate or activate through the skin of peripheral nerves to control pain with F : 2 times a week, Frequency : 160 hz , Mode Frequency : 20 hz , Intensity : patient tolerance, Duration : 30 minutes. Then do Mobilization exercises that aim to increase motion in the hip joint so that there is no stiffness or limitation in the joints so that it can be slowly moved 2 times a day for exercise and maintain abdominal and pelvic muscle strength with Pelvic Floor exercises in the form of Kagel's Exercise can strengthen the muscles surrounding reproductive organs and improve muscle tone around the reproductive organs.

Pelvic floor muscle exercises help increase urethral and periurethral striated tone and strength, and should be performed during pregnancy and after delivery to help the pelvic muscles return to normal function, l with 2 times a week I: 5-8 seconds with each contraction 3-4 times then rest for 6 seconds. again 8 to 12 times, repetition of each movement, performed 2 times a day. With

improved results from reduced pain, increased muscle strength and increased joint range of motion and functional abilities began to improve.

Discussion

The width of the pubic symphyseal joint is between 2.6 mm and 4 mm. It can widen by 3 to 4 mm during the course of pregnancy. A healthy joint is highly resistant to separation and requires significant exacerbation in order to rupture. Multiparous women undergo weakening of their ligamentous support, which further worsens during the course of pregnancy. Ligamentous laxity is mediated is mediated V. Palvia et al. 124 by relaxin and progesterone, which cause collagen degradation and remodeling by inducing expression of matrix metalloproteinases. Most patients have resolution of their symptoms by 6 months but some may have persistent chronic pain for 12 months or beyond. Repeating a hip x-ray is appropriate 6 - 10 weeks after the injury to assess proper healing and approximation of the pubic bone. For symptomatic patients, continued physical therapy will benefit the patient for pain relief, muscle strengthening, and quicker return to activities of daily living. Patients should be encouraged to reduce non-essential weight bearing and to rest when possible and with ligament laxity that can stretch the symphysis pubis

Conclusion

In the case of Symphysis Pubic Diastasis, which received treatment in the form of Tens, mobilization exercise and pelvic floor exercise to reduce pain, increase muscle strength and increase functional ability gradually and it is recommended to use a hip belt every day.

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References

Alicia Urraca-Gesto, M. A., Plaza-Manzano, G., Ferragut-Garcías, A., Pecos-Martín, D., Gallego-Izquierdo, T., & Romero-Franco, N. (2015). Diastasis of symphysis pubis and labor: Systematic review. *Journal of Rehabilitation Research and Development*, *52*(6), 629–640. https://doi.org/10.1682/JRRD.2014.12.0302

Aslan, E., & Fynes, M. (2007). Symphysial pelvic dysfunction. *Current Opinion in Obstetrics and Gynecology*, *19*(2), 133–139. https://doi.org/10.1097/GCO.0b013e328034f138

Depledge, J., Mcnair, P. J., Keal-smith, C., & Williams, M. (2005). Management of Symphysis Pubis. *Physical Therapy*, *85*(12), 1290–1300.

Gabriel, A. O., Oladire, O., Jovita, D. A., Ethelbert, O. O., & Chukwuemeka, O. C. (2015). Transcutaneous Electrical Nerve Stimulation (TENS) in the Management of Peripartum Diastasis Symphysis Pubis (DSP): Cases Report. *Indian Journal of Physiotherapy and Occupational Therapy - An International Journal*, *9*(3), 221. https://doi.org/10.5958/0973-5674.2015.00127.6

Harvey, M. A. (2003). Pelvic floor exercises during and after pregnancy: a systematic review of their role in preventing pelvic floor dysfunction. *Journal of Obstetrics and Gynaecology Canada : JOGC = Journal d'obstétrique et Gynécologie Du Canada : JOGC*, *25*(6), 487–498. https://doi.org/10.1016/S1701-2163(16)30310-3

Jayaraman, J. K., Ganapathy, P., & Indira, N. (2015). Post-partum diastasis of the pubic symphysis: Report of a rare case. *Journal of Clinical and Diagnostic Research*, *9*(9), QD09-QD10. https://doi.org/10.7860/JCDR/2015/14513.6487

Khorashadi, L., Petscavage, J. M., & Richardson, M. L. (2011). Postpartum symphysis pubis diastasis. *Radiology Case Reports*, *6*(3), 542. https://doi.org/10.2484/rcr.v6i3.542

Lawson, S., & Sacks, A. (2018). Pelvic Floor Physical Therapy and Women's Health Promotion. *Journal of Midwifery and Women's Health*, *63*(4), 410–417. https://doi.org/10.1111/jmwh.12736

Mulchandani, N. B., Jauregui, J. J., Abraham, R., Seger, E., & Illical, E. (2017). Post-partum management of severe pubic diastasis. *Clinical and Experimental Obstetrics and Gynecology*, *44*(3), 464–466. https://doi.org/10.12891/ceog3533.2017

Norvilaite, K., Kezeviciute, M., Ramasauskaite, D., Arlauskiene, A., Bartkeviciene, D., & Uvarovas, V. (2020). Postpartum pubic symphysis diastasis-conservative and surgical treatment methods, incidence of complications: Two case reports and a review of the literature. *World Journal of Clinical Cases*, *8*(1), 110–119. https://doi.org/10.12998/wjcc.v8.i1.110

Palvia, V., Kim, S., Warholic, H., & Anasti, J. (2017). Severe Pubic Symphysis Diastasis Managed Conservatively: A Case Report and Review. *Case Reports in Clinical Medicine*, *06*(04), 120–126. https://doi.org/10.4236/crcm.2017.64010

RE, L., D, M., & SW, L. (2004). Symphysis pubis dysfunction: a review of the literature. *Journal of Maternal-Fetal and Neonatal Medicine*, *16*(6), 349–354. https://doi.org/10.1080/14767050400018247

Scicluna, J. K., Alderson, J. D., Webster, V. J., & Whiting, P. (2004). Epidural analgesia for acute symphysis pubis dysfunction in the second trimester. *International Journal of Obstetric Anesthesia*, *13*(1), 50–52. https://doi.org/10.1016/j.ijoa.2003.08.006

Shim, J. H., & Oh, D. W. (2012). Case report: Physiotherapy strategies for a woman with symphysis pubis diastasis occurring during labour. *Physiotherapy*, *98*(1), 89–91. https://doi.org/10.1016/j.physio.2011.01.005

Sung, J. H., Kang, M., Lim, S. J., Choi, S. J., Oh, S. young, & Roh, C. R. (2021). A case–control study of clinical characteristics and risk factors of symptomatic postpartum pubic symphysis diastasis. *Scientific Reports*, *11*(1), 1–6. https://doi.org/10.1038/s41598-021-82835-8

Theodorsen, N. M., Strand, L. I., & Bø, K. (2019). Effect of pelvic floor and transversus abdominis muscle contraction on inter-rectus distance in postpartum women: a cross-sectional experimental study. *Physiotherapy (United Kingdom)*, *105*(3), 315–320. https://doi.org/10.1016/j.physio.2018.08.009

Tripathi, S. K., Kumar, S., Agarwal, N. K., Khan, A., jain, P., & Nanda, S. N. (2016). Post Partum Pubic Diastasis: A Case Report. *Annals of International Medical and Dental Research*, *2*(5), 3–6. https://doi.org/10.21276/aimdr.2016.2.5.or4

Wahyuni, H. (2009). Hubungan Antara Diastasis Musculus Rectus Abdominis Dengan Involusi Uteri Postpartum Pervaginam. *Fisioterapi*, *9*(2), 59–68.

Wainwright, M., Fishburn, S., Tudor-Williams, N., Naoum, H., & Garner, V. (2003). Symphysis pubis dysfunction: improving the service. *British Journal of Midwifery*, *11*(11), 664–667. https://doi.org/10.12968/bjom.2003.11.11.11831

Wellock, V. K., & Crichton, M. A. (2007). Symphysis pubis dysfunction: Women's experiences of care. *British Journal of Midwifery*, *15*(8), 494–499. https://doi.org/10.12968/bjom.2007.15.8.24390