A 27-year-old gravida 2 para 1 woman had no history of connective tissue disorder, pelvic trauma, or antepartum complications following spontaneous vaginal delivery of a 5 lb 5 oz viable male infant. On postpartum day 1, she reported abdominal pain and cramping with progressively worsening right thigh pain. She attempted ambulation but collapsed secondary to pain and sensation of pelvic instability. Computed tomography images were obtained and revealed a 5.5-cm separation of the pubic symphysis and anterior widening of the sacroiliac joint. A pelvic binder was placed to provisionally stabilize the pelvis, and the patient was immediately transferred to a higher level of care for evaluation and management.

With the binder in place, the repeat imaging showed that the pubic symphysis was reduced to 3.5 cm (Figure 1). An orthopedic consult was placed, and the assessment was made that the symphyseal ligaments and right-sided anterior sacroiliac ligaments were torn. Same-day open reduction and internal fixation was performed for reduction of the pubic symphysis diastasis with a 3.5-mm pubic symphysis plate (DePuy Synthes, West Chester, Pennsylvania), secured by six 3.5-mm cortical screws. Postoperative imaging showed anatomic reduction of the symphysis pubis to 5 mm with good anatomic alignment (Figure 2).

On postoperative day 5, the patient was hemodynamically stable with good pain control, and she was discharged home with non-weight-bearing precautions. Three weeks postoperatively, the pelvic radiograph showed that the pubic symphysis was in good alignment, and her pain was well managed by acetaminophen.

Conservative management is typically recommended for postpartum diastasis of the pubic symphysis, despite significant functional disability and chronic pain associated with this condition. With a reported incidence of 1:500, the authors describe diagnosis and management controversies with an additional review of relevant literature related to the management of this orthopedic condition. The case is of a 27-year-old woman diagnosed with 5.5-cm diastasis of the pubic symphysis after spontaneous vaginal delivery of a 5 lb 5 oz infant. She underwent early orthopedic surgical correction via open reduction and internal fixation. The patient achieved pain-free ambulation within 3 months of surgery, and returned to full activity at 6 months. Postpartum diastasis of the pubic symphysis is typically treated conservatively; however, the authors illustrate that early orthopedic consultation and intervention at diastasis greater than 5 cm may improve recovery and functional outcome.

taken only at night. Three months postoperatively, her pain had resolved, and her pelvic imaging continued to show proper anatomical alignment. The patient was allowed to begin ambulating and weight bearing as tolerated. At her 6-month follow-up appointment, she was ambulating without restriction, including running, jumping, and playing competitive sports.

**BACKGROUND**

Due to inconsistent reporting, diastasis of the pubic symphysis was once deemed an uncommon postpartum complication, with a varying incidence of 1:300 to 1:30,000. However, more recent studies suggest this condition is more common, between 1:385 and 1:500 births.

During pregnancy, relaxin and progesterone are released to prepare the pelvis for delivery, resulting in relaxation of fibrocartilage structures such as the pubic symphysis. The pubic symphysis is normally 4 to 5 mm and typically undergoes a 2- to 3-mm increase during pregnancy. The actual cause of atraumatic peripartum diastasis of the pubic symphysis is unknown; however, it is typically associated with underlying connective tissue disorders, cephalopelvic disproportion, and macrosomia. This condition, if mismanaged, can lead to significant functional disability and chronic pain.

The diagnosis is typically made clinically. Classic signs include pain in the pubic region that radiates to the lower back and thighs and is exacerbated by leg movement. One pathognomonic sign of symphyseal rupture is pain in the pubic symphysis with compression of the greater trochanters toward midline and the inability to flex the hips with the knees fully extended. Other signs include sacroiliac joint pain or a palpable cleft in the pubic symphysis. The diagnosis can be confirmed when diagnostic imaging (ie, ultrasonography, radiography, computed tomography, or magnetic resonance imaging) shows a pubic symphysis separation of greater than 1.0 to 1.3 cm.

Current management is typically conservative, which may lead to a delay in treatment and reluctance to act for an obstetric patient who has recently delivered. It has been reported that functional recovery is excellent with conservative management; however, this can result in prolonged recovery. In current practice, surgical management is typically not indicated when the pubic symphysis is less than 2.5 cm. The pubic symphyseal ligaments are unlikely to be compromised, and resolution typically occurs spontaneously. When the pubic symphysis is greater than 2.5 cm, which indicates disruption of the symphyseal ligaments, conservative management is also recommended with the use of nonsteroidal anti-inflammatory drugs, bed rest, pelvic binders, and physical therapy. If conservative management fails after the postpartum period (4 to 6 weeks), surgical intervention is then considered.

Surgical management is generally sought for a separation greater than 4 cm, as this has an increased association with sacroiliac joint disruption. However, without clear guidelines on time frame, this condition is also typically managed conservatively, with surgery as a last option. There have been reports of postpartum diastasis pubic symphysis of 11 and 9.5 cm being conservatively managed with no surgical intervention. However, these cases showed continued pain with ambulation that persisted through the 6-month follow-up, as well as continued symphysis separation, which increases the risk for symphyseal sclerosis, functional disability, and chronic pain.

**CONCLUSION**

The current case illustrates that early surgical consideration and intervention for postpartum diastasis of the pubic symphysis can result in improved outcome, including improved pain management and return to ambulation. The authors’ literature review shows that when the pubic symphysis exceeds 5 cm, conservative management frequently fails and surgical reduction must be made using open reduction and internal fixation or external fixation. The delay in surgical intervention prolongs recovery and increases the likelihood of persistent pain and functional disability.

In the authors’ patient, the early surgical intervention resulted in early pain resolution, and pain-free ambulation at 3 months postoperatively.

Postpartum diastasis of the pubic symphysis is an uncommon condition typically treated conservatively; however, based on the current case and other reports found in the literature, the authors suggest the need for further investigation and possible case series to revise the standard and possibly timing of surgical repair. This case shows that early orthopedic consultation and surgical consideration can improve outcomes when symphyseal separations are greater than 5 cm (where conservative manage-
ment has been frequently employed), as there is a large association with symphyseal ligament rupture and increased incidence of sacroiliac joint disruption. Delay in surgical intervention carries with it short- and long-term risks, which may be compounded by partial healing and increased surgical complexity. When surgical management is indicated, earlier surgical intervention is likely to decrease the recovery time and improve overall functional outcome.

**REFERENCES**