



A CASE REPORT OF PUBIC DIASTASIS TREATED SURGICALLY IN A YOUNG ADULT

Orthopaedics

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ABSTRACT

We report a case of pubic diastasis in a young adult, with no associated complications. The patient was surgically managed by open reduction and internal fixation of the pubic symphysis with a superior plate. It was done to immediately mobilise the patient in non-weight bearing, and to prevent post immobilisation morbidities especially in young adults. With the diastasis being larger than 2 cm, spontaneous healing was not likely to occur. In these cases, surgical interventions are indicated^[6]

KEYWORDS

INTRODUCTION:-

The pubic symphysis is a cartilaginous joint between the superior rami of the pubic bones. Symphyseal ligaments provided stability from pubis to pubis. Pelvic ring fractures, not treated appropriately depending upon various factors, consecutively, may result in symphysis pubis diastasis^[1, 2, 3]. Diastasis symphysis pubis is a separation of normally joined pubic bones, that is, the dislocation of the bones without a fracture. In young adults, it is commonly caused by trauma, as seen in this case. This abnormally wide gap can be diagnosed by radiologic studies such as X-ray, CT scan or bone scan. This injury can be classified using the Young -Burgess System^[6].

CASE REPORT:-

A 29-year-old male, came with complains of injury to the pelvis following a traffic collision. Patient gave an alleged history crashing his bike into a vehicle in front and direct trauma to his pelvis hitting the fuel tank of the bike. He also sustained a lacerated injury to his lower lip and neck. The patient was rushed to the emergency room where he was examined which showed a positive Pelvic compression test and positive pelvic distraction test. Patient was advised for an X-ray of the Pelvis. X-ray showed widening of the pubic symphysis, and then a CT scan of the pelvis was taken. Using the Young Burgess System, the injury was classified as Antero-Posterior compression (Symphyseal diastasis) type II, with the diastasis >2.5 cm. The lacerated wounds were sutured in the emergency room



Fig 2.2 CT Of The Pelvis Coronal Section



Fig 2.3 3D CT Of The Pelvis

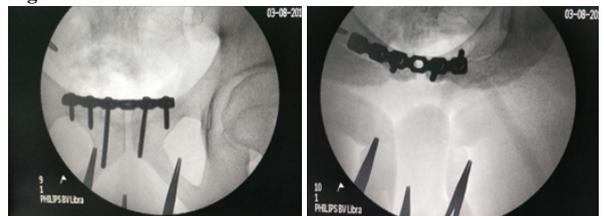


Fig 3.0 Intra Op C-arm Pictures



Fig 1.0 X-ray Of The Pelvis Ap View

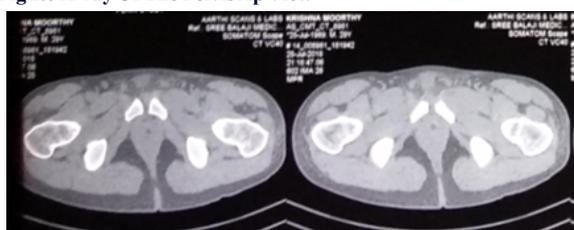


Fig 2.1 CT Of The Pelvis Transverse Section

Treatment: - The patient was managed surgically by Open reduction and internal fixation with a superior plate. Post operatively, he was managed with analgesics, antibiotics and other supportive measures. Immediate post-operative mobilization with rehabilitating physiotherapy exercises. He was walking without support by the end of 3 months.



Fig 4.0 Post Operative Wound



Fig 5.0 Post Operative X-ray Pelvis

CONCLUSION:-

The symphysis pubis is a significant structure that supports the neck of the urinary bladder anteriorly^[5]. If the pubic diastasis exceeds 2 cm, the pelvic floor support considerably decreases^[6], resulting in deficient urethral closure pressure and in the presence of increased intra-abdominal pressure, urinary incontinence^[5]. In these cases, the first treatment choice is not always surgery. If the symphysis pubis diastasis has presented itself during birthing, conservative management can be attempted^[7]. However, spontaneous healing is less likely to happen if the pubic diastasis is greater than 2 cm and if dependent upon a malunited pelvic fracture. In these patients, surgical interventions are indicated^[6]. Plating is more commonly used to fix symphysis pubis disruption even if associated with pelvic fractures. In critically ill patients, however, external fixator may be used as an initial management in the presence of life-threatening haemorrhage.

Oransky and Tortora^[2] had reported that, although few of the malunited pelvic deformities could be corrected, owing to the higher complication rates with residual deformities, surgical correction done immediately post trauma, is one of the best alternatives, as done in this case.

Inappropriate treatment of unstable pelvic fractures, such as using an external fixator as definitive treatment, can cause pelvic deformities and instabilities, which later on, decreases the quality of life^[2]. Morris et al stated that the high rate of fixation failure has no significant effect on the clinical outcomes. Parker et al suggested that surgical treatment must be preferred if the diastasis presents as greater than 3 cm^[8]. One case report has also supported neuromodulation with spinal cord stimulator.^[9]

The patient in our case tolerated the procedure well, and was mobilizing immediately with non-weight bearing for first 6 weeks and full weight bearing by the end of 3 months.

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