

## Complex Maternal Pelvic Fracture Fixation Through Pfannenstiel Incision

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### INTRODUCTION:

Traumatic pelvic injury in pregnancy is rare and have very little reference in order to guide the treatment. Aggressive resuscitation by multidisciplinary team approached are essential to ensure better maternal and fetal outcome. However, with life threatening trauma, including pelvic fracture a 50% fetal loss rate exist<sup>1</sup>. We present a case of patient with complex pelvic in pregnant lady with non viable fetus.

### CASE REPORT:

Madam N, a 36 year old lady, gravida 4 para 3 at 28 weeks of pregnancy, had involved in motorvehicle accident at remote area on 29/4/2016 at 9.45pm. She sustained multiple closed fracture including i) Closed fracture midshaft right clavicle ii) Closed fracture midshaft of right ulnar iii) Closed comminuted fracture right iliac crest iv) Closed fracture right acetabular wall with hip protrusion v) Closed fracture superior and inferior of right pubic rami vi) Closed fracture superior left pubic rami. After resuscitation, patient survived, however emergency lower segment caesarian section could not be carry out as patient have underlying lung fibrosis.

Patient was planned for lower segment caesarian section (LSCS) with bilateral tubal ligation (BTL) preceding with open reduction and fixation of right ilium and right acetabular wall. Operation was done under general anesthesia and patient was on supine position. Pfannenstiel incision with rectus abdominis was splitted vertically for LSCS. Intraoperatively, uterus was noted to have bruises that resolved spontaneously after the delivery. This may explained cause of intrauterine death which is secondary to hypoxia. After BTL, surgery was took over by orthopaedic team for open reduction and fixation of right ilium and right acetabular wall.

For the pelvic fixation, pfannenstiel incision was used as medial window with rectus abdominis was cutted and reflected proximally to gain access for pubic rami. The incision was extended laterally to anterior superior iliac

spine (ASIS) and subsequently along anterior 2/3 of iliac crest to create middle and lateral window. Reconstructive plate 3.5mm was used in order to construct the ilium. Subsequently, 2 screws was used to lag the anterior column of the acetabulum and another reconstructive plate 3.5mm was used to construct the pelvic brim and to add stability for screw fixation of the acetabulum. Rectus abdominis muscle that was cutted and splitted earlier was repaired post fixation.



Figure 1: Pre and post-fixation xray.

### DISCUSSIONS:

Matta and Saucedo, 1989 had reported the technique of using tranverse Pfannenstiel's incision in order to fixed anteriorpubic rami and symphysis pubic disruption. This incision is not only useful to create the medial window but also valid for cosmetic reason. Cutting the rectus abdominis muscle is also an acceptable measure to gain access to the medial window.

### REFERENCES:

1. Mattox KL, Goetzl L. Trauma in pregnancy. *Critical care medicine*. 2005 Oct 1;33(10):S385-9.
2. Matta JM, Saucedo T. Internal fixation of pelvic ring fractures. *Clinical orthopaedics and related research*. 1989 May 1;242:83-97.