

Fracture in Pregnancy: A Case Report

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Abstract: 36 year old multigravida, at 16 weeks of pregnancy presented with history of road traffic accident and was diagnosed to have fracture shaft of radius (lower 3rd). As closed reduction was unsuccessful, open reduction and internal fixation with low contact dynamic compression plate was done..

Keywords: Fracture Radius, Pregnant woman, Fetal heart rate, Road traffic accident.

INTRODUCTION

It is not uncommon for a pregnant woman to have trauma. In United States, traumatic injury remains as a significant complication of many pregnancies. Trauma affects as many as 8% of pregnancies and represents the leading non obstetric cause of maternal death [1]. It is a well-accepted principle that, for optimal outcomes for both mother and fetus, the mother should be assessed and resuscitated before the fetus [2]. Though it is not completely safe to give anesthesia or to carry out operative procedures during pregnancy, the trauma (fracture) cannot be left untreated or neglected in view of pregnancy.

CASE REPORT

36 year old patient, gravida 4 para 3 met with road traffic accident while driving fourwheeler. 16 weeks pregnant lady was immediately shifted to our hospital where, after the emergency care the fracture radius (Fig. 1) was diagnosed. Abdominal ultrasound showed single live intrauterine pregnancy (Fig. 2) of 15-16 weeks. Anesthesia and Obstetric opinion was taken and case posted with plan of Closed reduction and immobilization or Open reduction and internal fixation (ORIF). As Closed reduction was unsuccessful, ORIF with low contact dynamic compression plate (LCDCP) was done under brachial block. During the operation continuous Fetal heart rate (FHR) was monitored and no complications were encountered during or after surgery. Post operatively abdominal USG was done to confirm condition of the fetus. Post operative X ray (Fig. 3) of forearm showed acceptable reduction and fixation. Patient was on regular follow up, fracture went on to unite well. Patient delivered a healthy baby at 37

weeks of pregnancy and had painless and satisfactory movement at wrist and elbow with full supination/pronation.



Fig. 1: Preoperative radiograph showing displaced fracture shaft of left radius (lower 3rd)



Fig. 2: Abdominal ultrasound showing live intrauterine fetus corresponding to 15-16 week gestation



Fig. 3: Postoperative radiograph showing acceptable reduction and fixation of fracture

DISCUSSION

The pregnant woman is prone to many musculoskeletal injuries, most can be treated conservatively, but some require emergent surgical intervention [3]. Many pregnant patients in the United States undergo non obstetric surgery each year, with estimates placing the number at greater than 80,000 [4]. It is well established that many pregnant women are safely anesthetized daily without adverse effects to fetus or mother [5]. When surgical intervention is considered in a near term pregnancy, there is the possibility of delaying the operation until after the delivery or inducing a preterm delivery [6]. Our patient was in 2nd trimester, which is considered as relatively safe period to carry out operative intervention.

Fetal heart rate (FHR) monitoring can prove useful in identifying intraoperative conditions causing impairment in uteroplacental blood flow and therefore fetal oxygenation [5]. The evidence for using continuous fetal heart monitoring in order to avoid adverse outcomes is anecdotal [4]. We monitored the FHR during surgery, however many obstetricians feel that intraoperative FHR monitoring has little use because maternal derangements can be assessed and treated without it [7].

According to the guidelines provided by the American College of Obstetrics and Gynecology, radiation exposure of less than 5 rad has not been associated with an increase in fetal anomalies or pregnancy loss [8]. X ray of forearm taken twice in our case, one preoperative and other postoperatively. Abdomen of the patient was covered with lead apron in order to reduce the radiation to fetus. Per-operatively we did not use fluoroscopy, but used during Closed reduction by taking same precaution. Porter *et al.*, in his

acetabular fracture series of pregnant patients stated that with a team approach and the judicious use of radiographic imaging during the surgical care minimizes risk to the baby [9]. Since pregnancy is a hypercoagulable state, risk of DVT is increases 5 to 6 fold in comparison to general population [10]. No anticoagulation was given in our case as we mobilized the patient from day of surgery.

CONCLUSION

It is not uncommon to have trauma during pregnancy. If planning for operative intervention, it is better to tackle with team approach involving obstetrician and anaesthetist. With this approach operation can be carried out successfully without damaging the fetal outcome.

ACKNOWLEDGEMENT

We would like to thank late Dr. Ramachandra, former HOD, Orthopaedic Department for his constant support to academic activities. We also thank Dr. Sandhya (Department of Anaesthesia) and Dr. Sangeetha (Department of OBG) for their valuable opinions.

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