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RESEARCH ARTICLE
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A CATASTROPHIC EVENT ASSOCIATED WITH RUPTURE OF THE UNSCARRED UTERUS AND PLACENTAL ABRUPTION

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ABSTRACT:
Uterine rupture in patients with or without previous scar is a catastrophic event with a significant threat to the fetus and the mother. The rupture of the uterus without the previous scar is more threatening and associated with higher maternal and fetal morbidity and mortality.
We report a case here of a 35 years old gravida 4 with previous 3 normal deliveries who came in labour, at 36+ weeks and in active phase of the first stage of labour suddenly developed fetal bradycardia and bleeding, she was immediately shifted to operating room and emergency Cesarean was done intra operatively uterine rupture with complete placental abruption was found. The rupture was in the form of the T with vertical limb at the lower uterine segment and the horizontal limb of the T was involving the left broad ligament longitudinally. Left ureteric injury was suspected due to the position of the rupture which was confirmed and repaired by the urologist. The post op recovery of the patient was good but unfortunately the baby couldn't survive.
The PH of the cord blood was 6.9 which demonstrated the hypoxia of the baby due to the complete placental abruption.
The uterine rupture itself is associated with high morbidity and mortality but in the case under discussion, the fetal mortality was due to the additional contribution of the complete placental abruption.

Keywords: Unscarred Uterine Rupture, Placental Abruption, Gravid, Induction of Labour, Instrumental Delivery.

INTRODUCTION:

Uterine rupture whether in patients with previous scar or unscarred uterus is a serious life-threatening emergency and is associated with significant maternal and neonatal morbidity and mortality. The rupture of the unscarred uterus is not very common, its incidence is quoted as 1 in

16,849 [1].

The etiology of the rupture of the unscarred uterus is oxytocin, prostaglandins, instrumental delivery, uterine anomalies, high parity, mal presentation, internal podalic version and manual removal of the placenta.[2]

Uterine rupture is an extremely rare event in patients with previous spontaneous vaginal deliveries and no obvious risk factor[3].

Uterine rupture in unscarred uterus has been associated with much higher incidences of maternal and fetal morbidity[4].

Maternal morbidity includes severe hemorrhage requiring blood transfusion, injury to the ureter and urinary bladder with frequent need of the hysterectomy[5].

Early diagnosis and surgical intervention are the key to improve prognosis[6].

The rate of maternal death from uterine rupture is 0-1% in developed world, however in developing countries it is 5-10% [7].

CASE REPORT:

35 years old G4P3A0 (gravida four, para three with no abortion) with previous normal deliveries was admitted at 36+ weeks with labour pains. Her labour progressed smoothly, once in active labour she requested for the epidural which was started at 1427 hours.

At 1600 hours she was 6.0 cm dilated head was settling and CTG was reactive. At 1720 hours suddenly she developed bradycardia on CTG and on evaluation the patient was 7-8 cm dilated, with loss of position of the fetal head and had gush of bleeding. After taking the consent, anesthesia team was informed and the patient was shifted to the operating room for category 1 cesarean section, suspecting abruption.

After the top up of the epidural, immediately the incision was given and the hemoperitoneum was noted. The rupture site was found extending to the left fornix while the baby was still inside the uterine cavity. A 3.7 kg male baby was delivered with poor apgar score, 2/10 and 5/10, after 1 and 5 minutes respectively and was handed over to the NICU (Neonatal intensive care unit) staff. Cord blood was taken and the PH was 6.9. Complete placental abruption was found. The uterine incision extended down to the left fornix.

The rupture was in the form of the T with vertical limb at the lower uterine segment and the horizontal limb of the T was involving the left broad ligament longitudinally, extending to the left fornix. As the left ureter could not be identified properly so the urologist was called for help.

Once the urologist came on cystoscopy the left ureteric injury was identified and left ureteric stenting was done with the repair of the left ureter. As the injury was very close to the bladder so the

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urologist decided to re-anastomose the ureter to the bladder.
The uterus was then repaired in 2 layers. Hemostasis was secured with the help of surgicel both tubes and ovaries were found healthy, peritoneal lavage was done with 500cc of the normal saline. Abdominal drain was placed in and the abdomen was closed in reverse order. The estimated blood loss was 1200CC. She received two units of the blood.
After the surgery she was shifted to the labour and delivery room for close monitoring, she remained stable and on day 2 she was shifted to the post-natal ward on day 3 the abdominal drain was removed. She was discharged in stable condition on day 5 with the silicon foleys catheter to be retained for 14 days.
Unfortunately, the baby expired on day 2 due to respiratory failure. After day 14, her foleys was removed and she voided normally. Her follow up cystoscopy was done after a month the ureter was found to be well healed.

DISCUSSION:
The uterine rupture of the unscarred uterus is very rarely seen. Its incidence is quoted as 1 in 16,849 its usually traumatic and fortunately its incidence decreases with improvement in the management of the labour, however its incidence is on the rise in the developing countries[8].
The risk factors identified for the rupture in the current patient were preterm and multi-parity, which were the similar risk factors found in a retrospective study done in India from 2010-2012. The patient under discussion presented with signs of the fetal distress and the bleeding per vaginum which was the most common symptom found by Mazzone as well in her study[9].
The uterine rupture of the patient being discussed occurred during the active phase of the first stage which was in contrary to the findings of the Verneker M et al who experienced it during the second stage of labour.
Unfortunately, the baby had ENND (early neonatal death) which is also similar to the findings of the Rashmi et al, who reported the peri natal morbidity and mortality as high as to 78.6%[10].
Though the rupture itself is associated with the increased peri natal morbidity and mortality, however in this case the complete placental abruption contributed to the poor prognosis.
The patient under discussion had previous 3 normal vaginal deliveries with no other history of any gynecological procedures which could increase the risk of the uterine rupture. She was progressing well till 6.0cm when she developed bradycardia and bleeding, even at that time also the suspicion was of the placental abruption and that's why she was pushed to the operating room for the Caesarean. The hemoperitoneum confirmed the uterine rupture. The rupture was extended hence could be repaired and the uterus was saved.

The incidence of ureteric injury during LSCS is 0.4%[11].
However early recognition and the treatment improves the prognosis. In the case report under discussion the reason of the ureteric injury was the extension of the uterine scar, but fortunately detected and treated intra-operatively which improved the maternal prognosis. Ustunsoz B et al reported missing of the ureteric and the bladder injuries in 67-89% of all cases[12].

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CONCLUSION:

Unscarred uterine rupture is a rare event but its incidence is increasing specially in the developing countries due to poor availability of the obstetric facilities. However, its incidence is on the rise in the developed world as well, due to the liberal use of the induction, oxytocin and other uterotonics. Once found it is associated with higher perinatal and maternal morbidity and mortality. This case is a wonderful learning example of having the catastrophic events in low-risk patients and focuses on need of close observation and monitoring of all patients with low thresh hold of intervention.

CONFLICT OF INTEREST:

None.

SOURCE OF FINDING:

None