Case Report

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Penetrating chest wound of the foetus

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ABSTRACT

Traumas of the foetus caused by stabbings are rare but actually life-threatening for both the foetus and the mother. We report a case of penetrating chest wound on a baby taken from the obstetrics unit to the paediatric surgical department. His mother was assaulted by his father, a mentally sick person with no appropriate follow-up. The foetus did not show any sign of vital distress. Surgical exploration of the wound has revealed a section of the 10th rib, a laceration of the pleura and a tearing of the diaphragm. A phrenorraphy and a pleural drainage were performed. The new-born and its mother were released from hospital after 5 days and the clinical control and X-ray checks 6 months later showed nothing abnormal. We insisted a medical, psychiatric follow-up be initiated for the father. As regards pregnant women with penetrating wounds, the mortality rate of the foetus is 80%. The odds are good for our newborn due to the mild injuries and good professional collaboration of the medical staff. Penetrating transuterine wounds of the foetus can be very serious. The health care needed should include many fields due to the mother and the foetus' lesions extreme polymorphism. In our case, it could have prevented by a good psychiatric followed up of the offender.

Key words: Penetrating abdominal wound, pregnancy, transuterine wound, trauma of the foetus

INTRODUCTION

Up to 0.4% of pregnant women suffer from serious physical trauma requiring hospitalisation.[1] Amid these kinds of trauma, 9% are penetrating abdominal wounds out of which 2% are by stabbings. The damage caused to the foetus might be very serious, with a high mortality rate.[2,3]

To share our experience on medical care, we shall make a report on a chest wound of the foetus of up to 37 completed weeks since last menstrual period.

CASE REPORT

It deals with a foetus of 37 completed weeks of pregnancy that is a victim of trauma caused by stabbing. The mother has been assaulted by the father. The father, who is known to be a mentally sick person with no proper medical follow-up, has suddenly stabbed his wife in the abdomen and in the limbs with a kitchen knife. She was taken to the emergency unit of gynaecology/obstetrics. She was in a good hemodynamic state with four penetrating abdominal wounds with an epiplocele and signs of peritoneal irritation [Figure 1].

An ultrasound scan we did showed that the foetus was viable but the scan did not give any precisions on subsequent damage to the foetus.

In addition to serotherapy and tetanus immunisation, an antibiotic treatment with ceftriaxone and metronidazole were carried out. A laparotomy was performed under emergency by a general surgeon and an obstetrician-gynaecologist while a paediatric surgeon was ready to help out too. An isolated damage to the uterus was found. The caesarean delivery led to a

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live foetus with Apgar test scores of 9, 10 and 10. The newborn presented a running sore of 2 cm to the right side of the chest [Figure 2].

Surgical exploration has revealed that a section of the 10th rib, a pleural wound and a linear tearing of the diaphragm occurred without any damage to the abdominal viscera [Figures 3-5]. The exposed part of the lung was not hurt. We performed a phrenorraphy along with a pleural drainage. The post-operative course was uneventful. The removal of the thoracic drain was performed on the 3rd day after surgery. The mother and her baby were released from the hospital on the 5th day after surgery.

A psychiatric follow-up was initiated for the father. The radio-clinic checks of the 2nd month [Figure 6] and of the 6th month were normal for both the mother and the child.

DISCUSSION

Pregnant women seldom get penetrating abdominal wounds: <0.08% of pregnant women are concerned by it.[1-3] They are due to different types of assaults. An assault by a partner is rare. Physical violence between partners goes down by 50% during pregnancy.[4] Between 1% and 7.4% of pregnancies seemed to undergo physical violence.[5,6] In our case, the person who inflicted the violence was the husband, a mentally sick person with no proper follow-up. This shows how actually dangerous mentally sick people are and the necessity of a follow-up to help them become responsible members of their families and communities.

As regards penetrating abdominal wounds, the statistics are not so good for pregnant women because the death rate is 66% for the mother and between 73% and 80% for the foetus. The high death rate of the foetus is due to the multitude and complexity of the prognostic factors: Death or poor hemodynamic state of the mother, damage to the placenta or to the umbilical cord, the seriousness of the damage caused to the foetus, prematurity, inconsistency in providing health care.[2,3,7] In our case, the prognosis was good because the damage was not life-threatening, the stage of the pregnancy was good, an early medical care was



Figure 1: Penetrating abdominal wound of the mother with epiplocele



Figure 2: Penetrating wound at the base of the baby's right hemithorax



Figure 3: Section of the child's right 10th rib

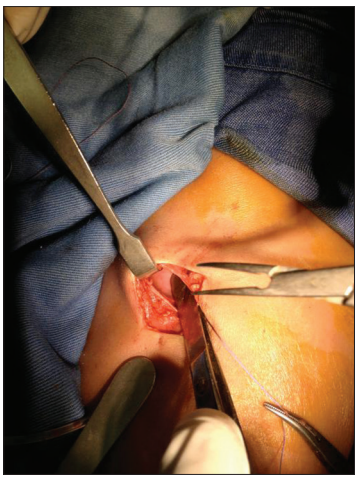


Figure 4: Pleural laceration with no damage to the lung parenchyma



Figure 5: Tearing of the diaphragm



Figure 6: Aspect at 2 months after surgery

provided, and the professional collaboration of the medical staff was good and included intensive care anaesthetists, gynaecologists, general surgeons, paediatric surgeons and psychiatrists. Penetrating wound to the right side of the chest required and exploration and a wound debridement that helped us diagnose and treat the damage to the diaphragm, rib, as well as pleura. The main changing risks in the absence of an early surgery are the uncompensated respiratory and cardiac failure as well as later infection with pyopneumothorax, anything that would have contributed to lower the vital prognosis of the child.

CONCLUSION

Transuterine injury of the foetus caused by penetrating abdominal wound of the mother is often life-threatening and has a high mortality rate. The health care needed should include many fields due to the mother and the foetus' lesions extreme polymorphism. The prognosis was specifically good in our case because the damage was not so serious. Moreover, the specific assault by a mentally sick person should remind us of a need to initiate regular medical follow-up for the mentally sick living in our communities.

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Conflicts of interest

There are no conflicts of interest.

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