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CASE STUDY

SNAKE BITE DURING PREGNANCY-A CASE REPORT

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ABSTRACT

Snake bite envenomation is uncommon during pregnancy. We report a case of primigravida with term gestation presented with history of snake bite, patient had severe coagulopathy and she recovered after giving anti snake venom, antibiotics and transfusion of blood products. In pregnant women with snake bite more fetal deaths were seen with mothers who received anti snake venom injection than those who did not receive. Here is a case scenario.

Key words:

Snake bite envenomation, Pregnancy, Obstetrical consequences, Fetal death.

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INTRODUCTION

In developing countries like India where poisonous snakes are more and due to lack of rapid transport and intensive medical care, more deaths are reported. Poisonous snake bite can cause adverse effects in both pregnant mother and fetus. Previous literature reviews found that fetal deaths ranged from 38-43% and maternal deaths were around 10% after poisonous snake bites (Ricky Lee Langeley, 2010). Whereas the mothers who received anti snake venom injection, fetal deaths were reported to 55-58% due to anaphylactic reactions caused by anti snake venom injection on both mother and fetus. (Dunnihoo *et al.*, 1992; Langley, 2004) Poisonous snake bites during pregnancy are rarely reported and hence this rare case report is being presented.

CASE REPORT

A 20 year old primigravida with term gestation residing in rural area presented to our hospital with history of snake bite on previous night. She had symptoms of bleeding gums, haematuria and decreased urine output. She has not taken any first aid treatment for 24 hours. After coming to the hospital, patient was examined her vitals are stable, bleeding gums were seen with haematuria and decreased urine output on catheterization. Snake bite marks were present on right foot with minimal cellulitis.

Per abdomen examination showed term gestation with good fetal heart rate of 140 beats per minute and relaxed uterus. Patient was admitted in ICU at 11:00 pm. Patient was investigated. Her coagulation profile was altered. PT, APTT were elevated with platelet count of 87,000/cu.mm. This case was combinedly managed by intensivist and physician. Antisnake venom injection started. General management of patient with intravenous fluids, antibiotics, strict input and output chart was maintained. One unit of whole blood transfusion was started. Meanwhile sudden intrauterine death of the fetus was noticed at 3:00 am, hence labour was induced with 25 micrograms of misoprostol per vaginally, three doses of 25 micrograms of misoprostol repeated 4th hourly. As there was no progress of labour and the coagulation profile was altering emergency caesarean section was done under general anesthesia a dead male child was delivered. Atonic post partum haemorrhage of about one litre blood loss was found and managed with uterotonics. Four units of whole blood, four units of platelet rich concentrates and three units of fresh frozen plasmas were transfused. General condition of the patient gradually improved and her coagulation profile was almost normal by third post operative day.

As there was increase in cellulitis at the site of snake bite, daily magnesium sulphate dressings were done along with antibiotics. Post operative recovery was good, suture removal done on sixth post operative day and she was discharged on seventh post operative day with good general condition.

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DISCUSSION

Snake venoms are primarily composed of mixtures of proteins and polypeptides with various properties. Many proteins have enzymatic activities, whereas others produce toxic cellular effects. Actions of snake venom can be broadly classified as inflammatory, cytotoxic, neurotoxic and haematotoxic (Ricky Lee Langeley, 2010). Snake venom may directly act on uterine musculature or indirectly by releasing the bradykinins and cytokines due to tissue damage, thus initiating uterine contractions (Komori *et al.*, 1988; Mori and Sugihara, 1988; Wangai *et al.*, 1981; Andriao-Escarso *et al.*, 1999; Gomes *et al.*, 2001). Toxin in small amounts reaches placental circulation and produces haemorrhages leading to abruptio placenta and coagulopathy (Nawar *et al.*, 1989).

The causes of fetal death in case of snake bite are fetal anoxia associated with maternal shock after envenomation, (Pantanowitz and Guidozi, 1996) haemorrhages into the placenta and uterine wall causing abruptio placenta, (Dao *et al.*, 1997) premature uterine contractions initiated by the venom, pyrexia and cytokines released after tissue damage, (Parrish and Khan, 1966) maternal haemorrhage leading to acute fetal anaemia, (Entman and Moise, 1984) supine hypotension syndrome (Sutherland *et al.*, 1982) and anaphylaxis to anti snake venom (Zugaib *et al.*, 1985) Administration of anti snake venom and correction of coagulopathy by transfusing blood products saved the patient from the consequences of snake bite. Anti venoms which may be used in the treatment of envenomed mother can cause anaphylactic reactions that may have an adverse effect on the mother and the fetus (Seneviratne *et al.*, 2002). Anti snake venom therapy and treatment with adrenaline for anaphylaxis may compromise placental circulation (Entman and Moise, 1984; Ngankee and Khaw, 2006).

Conclusion

Snake bite envenomation during pregnancy results in high fetal wastage and maternal mortality. Anti snake venom injection is the required treatment for snake bite as there is no other treatment to reverse the effects of snake venom. In this case intrauterine death may be due to anti snake venom injection or due to snake bite. Anti snake venom has been given to the mother because mother life comes first than the fetus in priority. To avoid these adverse effects more animal studies and human investigations are needed to evaluate the effect of anti snake venom and snake bite effects on mother and fetus.

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