



Neuroparalysis in Pregnancy-A Mystery Revealed

KEYWORDS

Pregnancy ,snake bite, neuroparalysis

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ABSTRACT *The occurrence of envenomation in pregnancy in the world is a rare occurrence as most of the woman are housebound. The severity of the envenomation determines the degree of obstetrical complications and consequences. We report a case of 24 year old patient with second trimester pregnancy showing signs of neuroparalysis and was successfully treated with respiratory support .*

Introduction:

Reports of snake bites during pregnancy are rare mostly seen in men especially during agricultural activities and season. Most of the pregnant women especially in the second and third trimesters are house bound therefore reports of snake bites are a scarce and the outcomes are mostly unfavourable. We present a case of snake bite during second trimester pregnancy who showed signs of neuroparalysis and was successfully treated with respiratory support. Circumstantial evidence played a very important role in treatment in this case¹.

Case report:

We present a 24 year old patient with 25 weeks amenorrhoea with history of sudden onset of breathlessness ,chest pain and abdominal pain . She was unresponsive on examination and with tachycardia , tachypnea but haemodynamically stable . Her respiration became shallow and labored and she was immediately intubated and put on ventilator support. On assessment of her central nervous system her pupils were bilaterally equal and sluggishly reacting to light ,plantars were flexor response but patient was still unresponsive.

A gynaecologist consult was taken and she was confirmed to be 25 weeks uterine size on examination and the fetal heart sounds were heard.

She was not a known case of bronchial asthma, had no history of fever, cough or high blood pressure.

She maintained oxygenation on ventilator and continued to be haemodynamically stable. Next day morning she was off ventilator support and conscious oriented and sitting up in bed and did not complain of breathlessness. Her only complaint being inability to open her eyes . On examination she had bilateral ptosis and diplopia on looking in one direction. On further enquiry from her she revealed she was sleeping on the floor at home the previous night and the symptoms of breathlessness and abdominal pain started in the early hours of the morning. On questioning further she confirmed the presence of snakes around the house.No bite mark was found on examination.

Upon investigating her electrocardiogram ,chest Xray were normal. Her ultrasonography confirmed a live intrauterine

pregnancy with gestational age 25 weeks.MRI brain and venography showed no intracranial abnormality and no dural venous sinus thrombosis.2Dechocardiography report was normal . Her haemogram showed leukocytosis and mild anaemia. Renal function tests, serum electrolytes and liver functions tests along with prothrombin time were. D Dimer ,procalcitonin ,Creactive protein were normal .The patient recovered without any neurological sequelae and a normal pregnancy .

Discussion:

India has about 60 venomous snakes but only four ,cobra, common krait, Saw scaled viper and Russell viper are more commonly known to be dangerous to man. In India out of 200,000 cases of snake bite per year about 45,000 to 50,000 succumb to death².

Snake bite is common as an occupational hazard amongst farmers and other outdoor workers but it a rare occurrence in pregnancy as the woman is usually house bound. Indian states of West Bengal, Tamilnadu , Uttarpradesh, Maharashtra and Kerala have high incidence of snake bites. Maharashtra has an incidence of 70 bites per 100,000 and a mortality of 2.4per 100,000 persons per year. Males are are two times likely to be bitten than the females usually on the lower limbs .About 10-80% bites of poisonous snakes are ' dry bites' that cause negligible envenomation. At times especially in the case of the krait the bite mark may not be visible as these snakes have short, fixed grooved fangs covered with mucous membranes. Thus the krait cannot usually bite through the clothes and delivers only a sublethal dose. Ptosis followed by ophthalmoplegia and paralysis of the palate, tongue, face neck muscles are some of the signs .Respiratory failure due to intercostals and diaphragm paralysis usually results in death if left untreated.

Antivenom treatment alone cannot be relied upon to save the life of a patient with bulbar and respiratory paralysis .Once there is loss of gag reflex, failure to cough or respiratory distress endotracheal intubation and initiation of mechanical ventilation is indicated. Antivenom itself carries a risk of severe reaction especially in cases of snake bites in pregnancy. Its scarcity and cost non effectiveness can cause a major hindrance in treatment ³.

In a study conducted in Maharashtra 91 cases of snake bite were studied ,26 cases showed symptoms of neuroparalysis,25 cases came with no signs of local envenomation. Clinical confirmation by observing the local bite marks and odema, bleeding and signs of neuroparalysis in some cases where the snake was not brought for corroboration⁴.

In India, the elapid snake bite is the commonest type of snake bite which causes neuroparalysis⁵.

The Indian common krait (*Bungarus caeruleus*) bite is most common in the monsoon season and summers as agricultural activities are frequent then and ventilator support was needed for unpredictable periods of time, in respiratory failure cases despite the administration of Anti snake Venom(ASV)⁶. In a study conducted in Sri Lanka all the cases of krait bites the patients were bitten when they were sleeping with insig-

nificant local signs but four patients showed signs of systemic envenoming myalgia, abdominal pain and paralysis⁷.

Conclusion:

Snake bite in pregnancy is an unusual occurrence and when it occurs there are two patients to consider the mother and the fetus. There is greater danger to the fetus when snake bite occurs earlier in the pregnancy and there are more chances of abortions and fetal malformations. The use of antivenom in pregnancy is dubious and respiratory support alone can play a very vital role in treatment of neuroparalytic snake bite cases . Many elapid snake bites cases, which are a common in India, often show no bite marks and local signs but here circumstantial evidence and history plays a very important role in diagnosing the cause of unexplained acute onset of respiratory failure as neuroparalytic snake bite.

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