



A Case Report of Snake Bite in Pregnancy

Matthew Anyanwu^{1,2*}, Kebba Gassama¹ and Nsaidzeka Romaric²

¹Edward Francis Small Teaching Hospital, Banjul, Gambia

²School of Medical and Allied Health Sciences, University of The Gambia, Gambia

***Corresponding Author:** Matthew Anyanwu, Senior Lecturer, Department of Obstetrics and Gynaecology, School of Medicine and Allied Sciences, University of the Gambia, Gambia.

Received: October 28, 2019; **Published:** November 15, 2019

Abstract

Snake bite in pregnancy is rare and few case reports have shown catastrophic outcome when the snake venom is poisonous.

Case Report: A 15 year old primigravida at estimated gestation age of 39weeks 4days was referred from a district health centre with history of snake bite and vaginal bleeding 3 days and 3 hours respectively prior to presentation. Pregnancy was booked with regular attendance and remained uneventful until after snake bite. Clinical examination and some investigations revealed abruption placenta, intrauterine fetal death, and preeclampsia, disseminated intravascular coagulopathy and elevated serum creatine though with adequate urine output. She had vaginal birth and made good recovery, however, the site of snake bite develops into a leg ulcer.

Conclusion: This teenager had catastrophic obstetrics complications with perinatal mortality and maternal morbidity which may not be explained by teenage pregnancy. Viper venom has been implicated in the available literature with these clinical features.

Keywords: Snake Bite; Pregnancy; Envenomation

Introduction

Snake bite in pregnancy is rare and few case reports have shown catastrophic outcome when the snake venom is poisonous. In the literature cases series abound on snake bites but specific bite in pregnancy is rare. Also the degree of envenomation in pregnant and non-pregnant state has not been clearly elucidated.

Case Presentation

Mrs MD, a 15 year old primigravida at estimated gestation age of 39.4 weeks, from Kerr Ali Kom village- Jokaddou; She is married, a farmer, a serrer and Muslim with no formal education.

Referred from Essau District Health Centre on the 06/10/18 on account of snake bite, 3 days and per vaginal bleeding, 3 hours prior to presentation.

In the evening of the 3rd of October as she went to fetch some corns to roast and eat, she felt a sharp pricking pain on the dorsum of her left foot.

She could not identify what it was but she suspected it could have been a snake due to the presence of two fang marks on the site of the injury.

She tied the area with a piece of cloth before rushing to the local healer for traditional treatment.

Upon arrival she was in mild painful distress. She was febrile to touch with unilateral pedal edema of the left foot, not pale, anicteric, acyanosed, BP 149/106 mmHg, P 129 b/min, R 20 mins/cycle T 37°C.

SFH was 38cm, cephalic presentation, tense and tender uterus. No FHR was appreciated. Cervical dilatation was 6cm dilated, amniotic membrane was intact, no active bleeding, and protein was 2+, BCT was indefinite.

Assessment: Snake bite at term complicated with abruption Placentae + IUFD + severe Pre-eclampsia + DIC.

Subsequent management includes the following; artificial rupture of membranes (ARM) was performed and labour was augmented with syntocinon infusion; MgSO₄ and antihypertensive instituted.

Maternal vital signs were monitored hourly and physician review requested.

After 6 hours into admission and monitoring, she delivered a female fresh still birth weighing 3.3kg via SVD, with no episiotomy or perineal tears.

Following delivery she had heavy vaginal bleeding (primary postpartum haemorrhage).

Bedside clotting time was indefinite.

Assessment of DIC was made

- IV Tranexamic acid 1g stat and continue 8hrly; rectal misoprostol 1000 microgram stat
- IV syntocinon 40IU in 500ml isotonic Normal Saline over 4 hours
- Three pints of cross-matched fresh whole blood was given, 3L of isotonic N/S was also given.

Blood pressure monitoring every 15 mins continued until patient was stable then daily 4 hourly monitor instituted.

Physician review: Continued IV Tranexamic acid 1g 8hourly and added antibiotics (IV Flagyl 500mg TDS, Ceftriaxone 1g BD). Also IV Antivenom 10ml stat was given.

Surgical review (orthopedic consultation); advised on limb elevation and to encourage active flexion and extension of the ankle joint.

After 72 hours on admission she was stable, making urine. No respiratory distress vital signs were within normal range (BP: 118/76mmHg RR103b/m, P: 20c/m). However, renal function tests revealed mild elevation of urea and creatinine (Urea 12.0 mmol/L Cr: 272 mmol/L), Hb: 9.8g/dL.

In view of the results nephrology review was requested and they advised on continuation of management, ensure strict input output chart and repeat renal function test after one week. This was repeated and parameters returned to normal.

After 10 days on admission left leg ulcer developed at the site of snake bite which was clean and daily dressing instituted. Patient was subsequently discharged from the clinic.

Discussion

Snake bites in pregnant women a very rare in most settings as the pregnant women are mostly house bound. They are not actively involved in farming or stroll outside the compound yard in the dark night. Therefore it is largely uncommon to have snake bite in pregnancy. However, in The Gambia there are 41 different species of snakes in Linda and Craig [1] out of those, 9 are considered to be venomous although only 3 are common, the Puff Adder.



Figure 1: Puff Adder

Bedside clotting time was indefinite.



Figure 2: Forest Cobra



Figure 3: Black neck spitting Cobra

In Kerr Ali Kom, where our patient comes from, the most common snakes are the Viper, Puff Adder and the Forest cobra [1]. Clinical features were in agreement with viper venom as documented in most literatures that Vipers are extremely quick and good in ambush [2,3]. They camouflage well within their surroundings. They have potent venom with fangs which could be lethal [4]. Also is on record that Vipers cause acute kidney injury in about 30% of the cases and coagulation defect [4,5]. Our patient had both renal derangement and coagulation defects.



Figure 4: Viper

The aetiopathogenesis of snake venom may vary in different species of venomous snakes however, most toxin present in the snake venom is a coagulating active agent, which, when injected into the maternal circulation, even in small amount, soon reaches the placental circulation. The venom apparently crosses the placenta in amounts that can cause systemic poisoning in the fetus even without evidence of envenomation in the mother [4,5]. The coagulation fraction gradually leads to a consumptive coagulopathy by fibrinogen depletion. Finally the blood reaches the decido-placental cleavage zone and starts its dissociation leading to abruption placentae [4,5]. In our patient this might explain sudden catastrophic event with perinatal mortality and maternal morbidity we observed.

However, there appears to be a modest improvement in maternal case fatality rate from 10% to 4-5% as documented in the extensive review of snake bite in pregnancy by Langley in 2010 [6]. Also in that review the overall rate of fetal loss is now around 20% from (38% to 43%) [6]. Our patient survived despite cascade of possible consequences of envenomation but with obvious fetal loss.

Conclusion

This teenager had catastrophic obstetrics complications with perinatal mortality and maternal morbidity which may not be explained by teenage pregnancy as pregnancy remained uneventful until after snake bite. Viper venom has been implicated in the available literature with these clinical features.

Bibliography

1. Linda Barnett and Craig Emms. Common reptiles in the Gambia. Publisher: Darwin Field Centre for Biodiversity Research, Education and Training (2005): 24.
2. De-kaa NLP, *et al.* "Snake bite in a pregnant woman-a case survived". *Asian Journal of Pharmaceutical and Health Sciences* 2.4 (2014): 440-441.
3. Dunning DR, *et al.* "Snake bite poisoning in pregnancy. A review of the literature". *Journal of Reproductive Medicine* 37.7 (1992): 653-658.

4. Pardal PPO, *et al.* "Snake bite in pregnancy: A preliminary study". *Journal of Venomous Animals and Toxins* 3 (1997).
5. Rita Mittal, *et al.* "A rare case of pregnancy complicated by snake bite". *International Journal of Reproduction, Contraception, Obstetrics and Gynecology* 5.1 (2016): 243-245.
6. Langley RL. "Snake Bite During Pregnancy: A Literature Review". *Wilderness and Environmental Medicine* 21.1 (2010): 54-60.

Volume 1 Issue 7 December 2019

© All rights are reserved by Matthew Anyanwu, *et al.*