DIGITAL GANGRENE FOLLOWING PRIMARY POSTPARTUM HAEMORRHAGE

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ABSTRACT
Digital gangrene is an uncommon complication following primary post partum heamorrhage. We report in this case, digital gangrene occurring in a 39 years old woman with history of long standing hypertension. The possible predisposing factor was arterial injury which could have resulted from the hypertension or the hypotension that followed the severe postpartum haemorrhage. The patient experienced progressive pain and swelling of the left hand, which eventually became gangrenous. Colour doppler was confirmatory. Early and appropriate interventions are encouraged in patients with similar presentation.

INTRODUCTION
Primary post partum hemorrhage is an important obstetric emergency. It can be associated with severe hypovolemic state, requiring urgent access to the vascular system as the only life saving step. Vascular canulation is a common and useful procedure in medical practice particularly for the administration of drugs, blood and other volume expander and for collecting blood specimen for laboratory analysis in urgent situations. It can be considered as a minimally invasive procedure that is basically guided by experience. Venous cannulation is more common than arterial cannulation in daily clinical practice. This procedure can be associated with some complications including infection, bleeding, haematoma formation, dissection and pseudoaneurysm[1].

Thromboembolism leading to gangrene and amputation of a limb or digits, though widely reported following cannulation in other acute emergencies[2.3], has not been widely reported as a complication in patients with post partum hemorrhage. Acute thrombosis of the radial artery in the absent of arteriosclerosis is a rare event[4].

We present a case of a patient with primary postpartum hemorrhage, who developed gangrene and subsequent amputation of the distal index finger after ipsilateral vascular cannulation. This case may serve to identify a group of patients who are increased risk of arterial embolism, as well as to detect early features of the conditions with a view to instituting early preventive measures.

CASE REPORT
Mrs O.A is a 39-year old unbooked para3^{+0} (3alive), who presented at our obstetrics emergency unit in December, 2006. She was in a state of hemorrhagic shock following primary postpartum hemorrhage of 4hours duration. She had earlier delivered in a traditional birth attendance (TBA) clinic, from where she was transferred to our unit. The only significant finding in her medical history is that she was a known hypertensive, diagnosed 3years earlier and complied poorly with her medications.

On examination, she was severely pale, with cold extremities. Her pulse was fast and feeble and blood pressure was 60/40mmhg. The respiratory system was normal. Abdominal examination revealed a uterine size compatible with 24 weeks pregnancy, soft and poorly contracted. Other abdominal findings were normal. Blood specimens were taken for urgent packed cell volume and to group and cross matching 4 units of blood.

Meanwhile the foot of her bed was elevated and urethral catheter was passed. A vascular access was achieved after much difficulty and she was

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given 1 liter of normal saline fast before the arrival of the blood. Intravenous ergometrine 0.5mg was administered as bolus while 20 units of oxytocin was added into another infusion that ran for 4hours.

As a definitive management, genital tract exploration was done for her in the second stage room of the labor ward. Retained products were evacuated from the uterus and a bleeding episiotomy site was repaired with chromic catgut size 2/0. She was observed for 4 hours in the labor ward and was transferred to the postnatal ward in a stable clinical condition.

She was also on oral Ampiclox and Metronidazole for five days. The intravenous line was discontinued on the 2nd postpartum day and her condition was stable clinically. However, on the 3rd postpartum day, after discontinuation of all intravenous infusions, she complained of pain in the left index finger and the left hand was swollen. Further examination revealed pallor, warmness, and tenderness involving the left index finger and the thumb. The left radial and ulnar pulsations were easily palpable. She was given Ibuprofen and chymoral (anti–trypsin) tablets to relief pain and inflammation, while the physiotherapy and orthopeadic and trauma teams were also invited to co- manage. The swelling and pain were subsiding, while a bluish discoloration was later observed on the radial half of the hand despite all measures. The distal portion subsequently auto-amputated. A colour Doppler ultrasonography was requested and carried out, with the following report:

Normal triphasic arterial waveform demonstrated in the brachial proximal radial, entire length the ulnar and interosseous arteries. No demonstration of radial artery beyond 20cm from anatomical snuff box.

Results of laboratory investigations:

Packed cell volume- 13% (Day1), 16% (Day3), 21 %(Day 6)

Fasting blood sugar – 81mg/100ml

Blood group – B Rh D positive

HBsAg – Negative

HIV 1 & 2- Negative

WBC – Normal

Figure 1

DISCUSSIONS

Primary post partum hemorrhage is one of the life threatening complications of labor.

That it occurred in a TBA home and was consequently associated with hypovolemic shock at presentation was not surprising. In such circumstance, rapid vascular access through venous cannulation is a life saving measure. Generally, vascular cannulation either arterial or venous has been demonstrated in several studies as a safe and uncomplicated procedure[5, 6]. In few instances however, it could be complicated thromboebolism causing ischaemia, as recorded in this case. This phenomenon, after arterial cannulation and requiring amputation has been reported in literature[2, 3] but doses not often follow venous cannulation. Possible aetiopathogenesis in this patient is the vascular damage following her long standing hypertension. In addition to this is the profound hypotension, which occurred with the severe blood loss. Some studies have identified other risk factors such as vasopressor, prior arterial injury, and embolism from the left side of the heart [3]. Hypertension, when long – standing and poorly controlled could also predispose to thromboembolic phenomenon.

Progressive pain and swelling with pallor or cyanosis are pointers to possible arterial embolism. Where there are no obvious reasons, it is suggested that prompt intervention with comprehensive vascular and haematological studies be performed without delay. This will go a long way in forestalling consequent gangrene and amputation.

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