ORIGINAL RESEARCH PAPER

Volume-7 | Issue-2 | February-2018 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A RARE OCCURRENCE OF PERIPHERAL SYMMETRICAL GANGRENE IN A POSTPARTUM WOMAN: A CASE REPORT

Gynaecology

Dr. Anuradha Kakani*	MD, DGO (OBST & GYNAE). Director Radiant Superspeciality Hospital Ex. Associate Professor JNMC Sawangi Meghe Wardha Sabnis Plot Kalyan Nagar Amrawati 444603 *Corresponding Author
Dr. Pavan Agrawal	MD DNB Interventional Cardiologist Director Radiant Superspeciality Hospital Sabnis Plot Kalyan Nagar Amrawati 444603
Dr. Ganesh Bansod	MD (Medicine) Intensivist Radiant Superspeciality Hospital Sabnis Plot Kalyan Nagar Amrawati 444603
Dr. Mahendra Chavan	MD(Anaaesthesia) Intensivist Radiant Superspeciality Hospital Sabnis Plot Kalyan Nagar Amrawati 444603

ABSTRACT

Introduction

Symmetrical peripheral gangrene (SPG) is an uncommon but devastating complication in critically ill patients with a high mortality. It was first described by Hutchison in 1891(1). Despite the frequent use of ergots and settings of sepsis, we rarely encounter SPG in pregnant women. Whether it is because of physiological changes in the peripheral vascular system during pregnancy (increased plasma volume, decreased plasma osmolality and decreased peripheral resistance) that actually prevents severe vasospasm is not fully understood?

Here we describe a case where SPG occurred in a postpartum patient with Septic shock with acute renal failure with cardiomyopathy (PPCM).

KEYWORDS

Symmetrical peripheral gangrene (SPG), Post partum cardiomyopathy (PPCM),

Case Presentation

A 25year old second gravida previous one live issue 34wks pregnancy presented to us with history of fever since 5 days for which she was admitted at govt. hospital. She was investigated for Malaria, Dengue, Typhoid fever which was negative. On 5th day of fever she developed hypotension and her urine output was less so inotrop drip was started and she was referred to higher center. She had loss of fetal movement since one day. She had received one unit of whole blood at Govt. hospital and no other positive history and no ANC checkup details were available.

On arrival she was conscious oriented afebrile but she was dehydrated and in severe agony. She was pale her pulse rate was 130/min, blood pressure 60/30mmHg on inotropes, respiratory rate was 36/min and urine output was just 25 ml since last 5 hrs. On per abdominal examination she was 34 wks pregnancy, uterus was tense and fetal heart was absent. On pervaginal examination cervix was 2 cm dilated and 30% effaced. Investigations revealed hemoglobin 8 gm% and total leukocyte count (TLC) 22,600/cumm and Pl.Count (Platelet count) - 78000. Peripheral smear revealed normocytic hypochromic picture with neutrophilia with low platelet with toxic granules. Biochemistry revealed :Random blood glucose-110 mg%, total bilirubin-1 mg%, SGOT-65 IU/L, SGPT-24 IU/L, alkaline phosphatase-227 IU/L, albumin-2.8 g%, urea-65 mg%, creatinine-3.7mg%, uric acid-11.2 mg% and coagulation profile was deranged PT was 35.9 INR- 2.64 and APTT was 51. D- Dimer was 10ug/ml (positive). Urine showed albumin 1+ on dipstick and was negative for pus cells, red blood cells cast, and active sediment. HBsAg, HIV, and antinuclear antibody were negative. USG showed 34 wks Intra uterine Death with no evidence of placental separation. Chest X-ray revealed cardiomegaly. Electrocardiogram showed sinus tachycardia. 2D echocardiogram revealed LV hypokinesia with poor LV systolic function with left ventricular ejection fraction (LVEF) of 25%.

Patient was admitted in ICU, Central line was put fluid resuscitation was started according to CVP. Inotrope drip was continued at low dose. Broad spectrum antibiotic and 4 unit of FFP and 1 PCV was transfused. Simultaneously 5u pitocin drip was started as there was no progress of labor and as patient's condition was deteriorating so decision for LSCS was taken. Introperative was uneventful. Blood pressure remained persistently low, requiring addition of vasopressin infusion in the postoperative period. On 1st post operative day peripheral cyanosis of all the extremities was noted. On next day, small blebs/blisters were noticed first in the right hand and subsequently in other limbs which progressed to gangrene formation over the next 1 week. Radial and dorsalis pedis pulsations were well felt in all limbs. A differential diagnosis of early gangrene was made. Therapy in the form of broad spectrum antibiotics, low molecular weight dextran and pentoxyphylline, along with warming of extremities, 3 units of fresh frozen plasma was given and prompt attempts at withdrawal of noradrenalin was started. Investigations like prothrombin time 28 s (International normalized ratio 2.8), platelets 70,000/cumm, oliguria and acute renal failure confirmed DIC. Doppler evaluation of all the limbs was normal. Echocardiogram revealed absence of any septic foci. On per abdominal examination a well contracted uterus corresponding to 20 weeks gravid size was felt. Internal examination was normal. There was no prior history of intermittent claudication, cold or heat intolerance, tobacco smoking, collagen vascular disease or similar family history. Surgical consultation was sought. After 6-7 days line of demarcation of the gangrenous area appeared to involve finger tips and toes. Her condition gradually stabilized and improved. Patient was discharged on pentoxyphylline, with advice to take care of hand and regular follow up with plastic surgeon.

Discussion

Symmetrical peripheral gangrene is described as multiple extremity ischemias at two or more sites in the absence of large vessel obstruction [2, 3, 4]. Possible etiological factors include obstructive intracardiac lesions , sepsis, vasospastic conditions, small vessel obstruction, protein C deficiency, low cardiac output states, disseminated intravascular coagulation (DIC), and factor V Leiden mutation [1,2,3]. The aggravating factors are diabetes mellitus, cold injury to extremities, renal failure, and use of vasopressors [5]. Septic shock results in a state of low perfusion to peripheries. Low flow state results in occlusion of the microcirculation of the affected parts which present as pallor or cyanosis, coldness, and pain in the extremity in the initial phases. If appropriate care is not provided at this stage, the digits may progress to become erythematous with dusky discoloration of skin followed by development of bulla or blisters that subsequently result in formation of gangrene [4]. This could be aggravated by the use of vasopressors to treat profound hypotension before optimization of fluid status as it would result in even more sluggish flow in the microcirculation [4,5]. The first line of management, when the perfusion to peripheries is doubtful, should be to resuscitate aggressively with fluids with the aim to discontinue vasopressors as soon as possible [3]. Vigorous therapy of sepsis with intravenous antibiotics and anticoagulation for DIC are the other suggested measures [4]. Sympathetic blockade, intravenous vasodilators, local injection of alpha-blockers, and phosphodiesterase inhibitors have all been attempted after appearance of digital ischemia [2,3]. However no

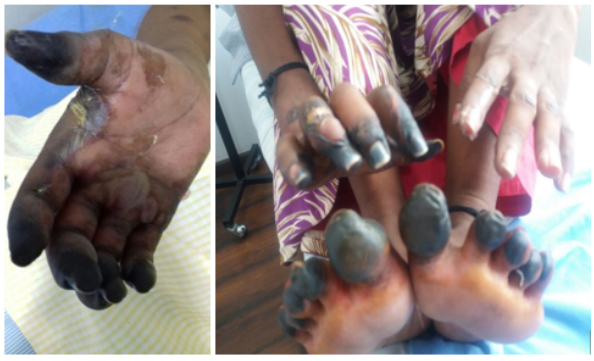
treatment is universally effective. It should be individualized according to the underlying disease and patient's general condition. Early recognition of the SPG and immediate discontinuation or reduction (if possible) of the vasopressors may prevent its further progression. Local debridement and secondary skin grafting have not been shown to be successful, and amputation should be considered only after a clear line of demarcation develops [4].

Our patient was young with no prior evidence of major occlusive disease, connective tissue disorder or any other identifiable cause for gangrene. She developed PSG in post partum period; sepsis along with multiple factors like, DIC, hypotension, renal failure and inotrop infusion may be implicated in our case. Although sporadic reports of PSG in pregnancy have been reported mainly due to underlying vascular occlusive disorders or following abortions induced by ergots with a high amputation rate and mortality [2–5]

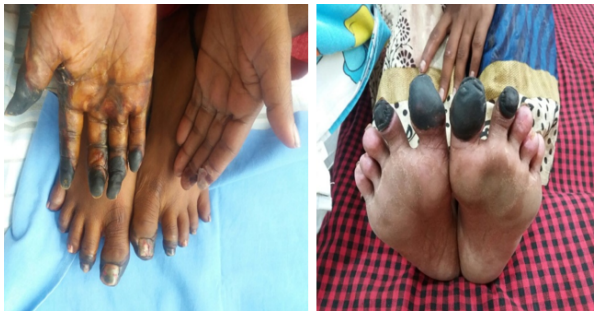
The key to avoiding such a disastrous outcome is early recognition and aggressive management of sepsis and other aggravating factors so as to prevent the development of ischemia and gangrene.

Conclusion

Occurrence of peripheral symmetrical gangrene is rarely seen in Post partum period. The rarity of this complication suggests that it is produced only by specific combination of predisposing events. We presented this case to highlight the importance of identifying and treating pre-gangrenous changes in limbs early enough to avoid amputation. However, once ischemia developed, it is difficult to prevent its relentless course to gangrene. Hence, we need to have a high index of suspicion, provide early treatment of underlying consumptive coagulopathy, correct hypovolemia, and control septicemia is the mainstay of the treatment.



On 3rd Post operative day



After 6 wks post operative

REFERENCES

1. A Jaryal, S Raina, S Thakur, T Sontakke- Symmetrical peripheral gangrene associated with peripartum cardiomyopathy. Indian Dermatol Online J.2013 Jul-Sep; 4(3): 228–230.
2. L. Sharma, S. Mehta, S. Rajaram, R Aggarwal, N Goel Postpartum Peripheral Symmetrical Gangrene: A Case Report J Repord Infertil 2012 Apr-Jun; 13(2): 117–119.
3. S. Ahmed.El-agwany ,Z S.Abouzaid, N A.Mekhemar - Postpartum gangrene of three limbs complicating inotrope therapy: A case report Egyptian Journal of Anaesthesia Vol. 30 Issue4 October 2014, Pages 435-437
4. Ghosh SK. Symmetrical peripheral gangrene. Dermat Venereol. 2010;24(2):214–218.
5. W Chang, J PS Chern, Ching-Yun Kao Symmetrical Peripheral Gangrene in an Octagenerian Asian male with Multiple Morbidities: A Case Report -Journal of Clinical Case Reports April 18, 2012