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Unfolding of A Rare Gastrointestinal Pathology in Puerperium: A Case Report

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1. Abstract

The postpartum period is a critical period for both the woman and her infant. Sometimes systemic disease may be the underlying cause of maternal morbidity and mortality in this period. A 31-year-old patient developed severe pain abdomen on third day of postpartum period. Exploratory laparotomy and hemicolectomy were done. Histopathological examination revealed a diagnosis of Ischaemic colitis.

2. Introduction

The postpartum period is a critical period for both the woman and her infant. In this period, though the focus of the treating clinician is on the commonly observed complications, like postpartum haemorrhage, thromboembolism and puerperal sepsis, sometimes occult systemic disease may be the underlying cause of maternal morbidity and mortality. We present the case of a woman in her postpartum period where an unsuspecting and rare gastrointestinal pathology caused significant deterioration in maternal health.

3. Case Report

An unbooked patient Mrs X, 31 years old was referred to a tertiary hospital on 19/08/2020 from peripheral hospital with the diagnosis of G2P1L1 with 34wks+5d with severe anaemia (not in failure) in second stage of labour with previous normal vaginal delivery. She was an unbooked and uninvestigated case with no significant medical and personal history in this pregnancy. She had an uneventful normal delivery half an hour after admission.

Haematological investigations showed haemoglobin level of 6.3 gm/dl and thrombocytopenia with platelet count of 20,000/mm3 for which 1 packed cell and 4 platelets were transfused.

On postpartum day 3, she developed fever (100.5^{0}F) and complained of severe pain abdomen. On general examination, she had pallor and petechiae on both upper and right lower limb. Per abdomen examination showed rigidity, guarding and tenderness in all quadrants. Breast examination, per speculum and per vaginum examination were normal. Haematological and biochemical investigations were normal except a low haemoglobin (7.6) and low platelet count (40,000). X ray abdomen showed free gas under right dome of diaphragm and ultrasonography showed presence of free fluid. Patient denied any history of prior gastrointestinal complaints. Ultrasonographic guided tapping revealed its seropurulent nature. In consultation with surgeon and with provisional diagnosis of perforation peritonitis, exploratory laparotomy was done.

Per operatively, 250 ml of pyoperitoneum with flakes was present. Multiple perforations were seen over large bowel, involving transverse and sigmoid colon. Multiple patchy gangrenous areas over transverse colon (Figure 1) and mucosal ulcers throughout ascending, transverse and descending colon were seen (Figure 2) Uterus, bilateral tubes and ovaries, broad ligament and pouch of douglas was normal.

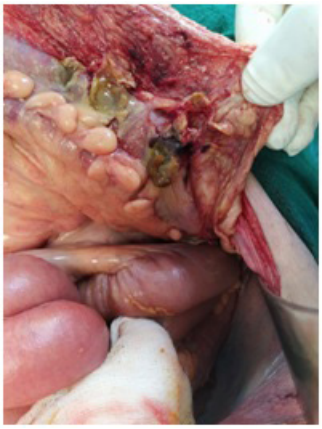

Figure 1: Ulcers on the colon

Figure 2: Cut Section of Colon

Extended right hemicolectomy, peritoneal lavage, Ileostomy with primary repair of sigmoid perforation was done. Intraoperatively 2 packed cell and 3 platelets were transfused.

Patient stood the procedure well and was shifted to Intensive care unit for post op management. Postoperatively patient was put-on broad-spectrum antibiotics and prophylactic low molecular weight heparin. In light of the peroperative findings, repeat history from close relatives revealed few episodes of bloody diarrhoea in the antenatal period for which no consultation was done. Also, absence of personal or family history of acquired or hereditary thrombophilia and chronic medications was confirmed. 8 hours after surgery patient suddenly developed dyspnoea and hypotension followed by cardiac arrest. Unfortunately, despite extensive efforts patient could not be revived. The cause of mortality was probably pulmonary embolism.

Histopathology report showed mucosal ulceration with moderately dense transmural acute on chronic inflammatory infiltrate with serosal exudates and ischemic changes suggestive of ischemic colitis.

4. Discussion

Ischemic colitis is defined as the inflammation of colon secondary to vascular insufficiency and ischemia. It commonly occurs in elderly women. The disease is uncommon in young adults and extremely rare in pregnancy. Ischaemic colitis has a multifactorial aetiology, occlusive and non-occlusive being the major mechanisms [1]. Occlusive causes include thrombosis/emboli, atherosclerosis, vasculitis, rheumatoid arthritis, diabetes and sickle cell disease while septic shock, haemorrhagic shock, drugs like antihypertensives, oestrogen, NSAIDS constitute the nonobstructive causes [1].

Segmental disease involving the left colon is more common and less severe than right colon ischemia. Latter is associated with higher rates of surgery and greater morbidity and mortality as was also reflected in the present case [2]. The morbidity and mortality are further increased (50%) in the patients requiring surgical intervention probably reflecting the severity of the disease in such patients [1].

Association of Antiphospholipid Syndrome (APS) to postpartum spontaneous colonic perforation has been reported [3].

Extensive review of literature revealed only one case report supporting this association of hypercoagulability of pregnancy with intestinal ischemia [4]. The pathophysiology of this disease at the microscopic level is still not well understood but the oestrogen induced hypercoagulable state seems to be the most plausible aetiology. The excess oestrogen probably causes increased risk of thromboemboli formation within the small segmental colonic vasculature. This hypothesis is supported by cases of ischemic colitis in women taking oral contraceptives [4].

Ischaemic colitis with its multifactorial aetiology and diverse clinical presentations poses a diagnostic challenge for the clinician. A thorough history especially in patients of chronic anaemia, a high index of suspicion in patients with bloody diarrhoea and adherence to sound surgical principles is necessary for timely diagnosis and management.

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