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An unusual case of a retroperitoneal haematoma: Challenges in diagnosis and management

SF: A 29-year-old primigravida of Bangladeshi origin, presented with sudden onset abdominal pain on day 4 post-caesarean section.

Background: SF had been diagnosed with gestational diabetes at 29 weeks and was under diet control. Although she had immigrated to the UK with her husband before falling pregnant and spoke limited English, she engaged fully in her antenatal care and attended all appointments.

Induction of labour (IOL) and birth: SF had spontaneous rupture of membranes following admission for planned IOL at 38 weeks 5 days of gestation. She subsequently developed pyrexia of 38.9°C during labour, and treatment was immediately commenced in line with the Trust Septicus Care Protocol. Blood cultures identified group B Streptococcus and urinalysis was positive for leukocytes. Despite treatment, SF continued to remain pyrexial. Maternal blood pressure was normal. A prompt decision to perform a grade II emergency C-section was made. The procedure was uncomplicated, with an estimated blood loss of 600 ml. A left natal fibral was excised at the same time. A live female infant was born with a birth weight 3095g. No resuscitation was required. Mother and baby remained on the ward for invasive antibiotic administration following delivery.

Day 4 post-op: SF presented with sudden onset abdominal pain, worse in the epigastric and left loin region and radiating to her back and chest. She described difficulty in breathing and nausea. SF had been passing urine and flatus regularly, but had not opened her bowels since the operation, despite eating and drinking well. She did not report any vomiting, PV bleeding or dysuria.

On examination, the patient was in painful distress. Abdominal examination revealed generalised tenderness but no evidence of ongoing intra-abdominal bleed. Her abdomen appeared grossly distended and bowel sounds were tympanic. The operative site was clean. Vital signs revealed hypotension at 148/98 mmHg and were otherwise normal. Oral antihypertensive medication and simple analgesics were administered at this point.

An initial diagnosis of paralytic ileus was confirmed by abdominal x-ray. Haematological, screen, metabolic panel and blood gases were all within normal limits. SF was treated for her ileus conservatively. Throughout the course of the day, SF’s blood pressure increased to 162/104mmHg despite oral antihypertensive. She also began to report mild headaches and visual changes. The patient was aggressively treated for late onset post-partum preeclampsia and switched to intravenous antihypertensive medication. Furthermore, repeat blood count revealed a fall in haemoglobin from 115g/L to 75g/L. 2 units of blood and an urgent CT scan was organised to haemoperitoneum.

The CT scan (fig 1) revealed a large, left sided retro-peritoneal haematoma (RPH), measuring 16 x 5 x 8.5cm in size compressing the upper aspect of the left kidney. Urology and surgical opinion was sought. Following a multi-disciplinary team discussion and as SF was hemodynamically stable with no evidence of renal compromise, conservative treatment was undertaken.

Outcome and follow-up: The patient was discharged in a stable condition on day 9 post-op. She was regularly followed up on an outpatient basis. A repeat CT scan after 6 weeks post-admission reported continued resolution of the RPH (Fig 2). SF made a full and complete recovery.

Discussion

Retroperitoneal haematoma is an uncommon clinical entity with variable underlying causes. Defined as bleeding into the retroperitoneal space1 that originates from structures within the peritoneal cavity, including the adrenal glands, duodenum, pancreas, aorta, ureters, ascending and descending colon, kidneys and rectum. Although it is a well-recognised complication across various specialties; it rarely occurs within obstetrics. In the general population, the incidence of retroperitoneal haematoma is approximately 0.1%, although this is higher in patients receiving oral anticoagulants2.

Due to the uncommon nature of retroperitoneal haematomas within obstetrics, there is a paucity of literature surrounding the topic. Current evidence base arises solely from case reports. The reported causes include: trauma (of genital tract origin)3,4, wound dehiscence 5, underlying arteriovenous malformations6,7, spontaneous rupture of arterial aneurysms8 and iatrogenic causes5.

Due to the non-specific nature of symptoms, RPH poses a challenging diagnostic dilemma. In the initial phases, there are often no obvious stigmata of an underlying expanding haematoma and diagnosis requires a high index of clinical suspicion. Patients may present with generalised abdominal, back, chest or groin pain. Cutaneous bruising (Cullen’s and Grey-Turner’s sign) presents as a relatively late sign of RPH, it is not helpful in early detection. Depending on the anatomical location, RPH can also rarely present with symptoms of femoral neuropathy9,10. Initially vague symptoms such as the above, may progress to haemodynamic instability and a fall in haemoglobin11. This complication carries significant morbidity and mortality; therefore, early detection is crucial.

In the case of SF, it is difficult to ascertain the exact aetiology. The finding of sudden severe hypertension crosses the possibility of silent rupture of arterio-venous malformations into the retroperitoneal space. Although SF did not have any biochemical abnormalities suggestive of pre-eclampsia, we believe it is important to consider the implication of developing post-partum pre-eclampsia (PET) and a RPH.

Darvela et al (2010)12 performed a retrospective analysis of 453 patients evaluating post partum retroperitoneal haematoma through left upper vaginal wall. Korean Journal of Obstetrics & Gynaecology (2011; 44(6) 314-316). of those patients, 20% were associated with haemodynamic instability and were diagnosed with retroperitoneal haematoma. In severe pre-eclampsia with coagulopathy, sub-capsular liver hematomas and wound haematoma13,14 are recognised complications and have been reported in literature.

Management of patients who present with RPH in the puerperium is similar through literature, however one must be meticulous. Literature has also highlighted that a simple ultrasound (US) can detect haematomas in an array of cases reported in obstetrics, and should be carried out in those in which a haematoma is suspected13,14. Operative versus non-operative approach is dependent on haemodynamic status, patient age, extent of clot on maternal examinations with expansive thinking and acting promptly to reduce the risk of harm. Although it is difficult to ascertain the exact cause in this case, the implication of severe hypertension / PET in the post-partum period and RPH is highlighted as an area of future research.

References