



HEMOPERITONEUM IN WOMEN OF REPRODUCTIVE AGE GROUP DUE TO CAUSES OTHER THAN ECTOPIC PREGNANCY.

Obstetrics & Gynaecology

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KEYWORDS

INTRODUCTION

This case series illustrates hemoperitoneum in women of reproductive age group due to causes other than ectopic pregnancy including ovarian cyst rupture, endometriosis-related complications, trauma-induced ovarian teratoma rupture and Corpus luteum cyst rupture. Through these cases, we emphasize the importance of early recognition, multidisciplinary medical care, and tailored surgical procedures for improving patient outcomes. These findings add to our collective understanding of acute gynaecological emergencies and underscore the need for future research to improve diagnostic and treatment procedures in clinical practice.

Case 1: Hemoperitoneum Secondary To Ruptured Ovarian Cyst

22 year old unmarried female presented to casualty during midcycle with complaints of diffuse abdominal pain of 1 day duration. On examination patient had severe pallor. Pulse rate was 110 beats per minute and blood pressure was 86/60 mmHg. There was abdominal distension and lower abdominal tenderness.

On evaluation haemoglobin was 4.6 g/dl and platelet was 1.35 L/cumm. Beta HCG was found to be negative. Ultra sonogram of abdomen shows Heteroechoic lesion right ovary. ? Dermoid. Mild to Moderate ascites. ? Possibility of ovarian torsion. General resuscitative measures started. 4 pint of packed red blood cells and platelets transfused. FFP transfusion done. After pre operative evaluation and obtaining anaesthesia fitness patient was taken up for emergency laparotomy under general anaesthesia. Intra operatively moderate to gross hemoperitoneum was present. Right ovary was found ruptured. No other bleeding points noted. Bleeding controlled with sutures and cautery.

Post operative period was uneventful. Patient treated with antibiotics, analgesics and other supportive measures. Post operative haemoglobin was 9.5gm/dl and patient got discharged on post operative day 4.

Case 2: Endometriosis-Related Hemoperitoneum

36 year old married nulliparous female presented with complaints of abdominal pain and dizziness of 1 day duration. Patient was in the mid menstrual cycle with history of ovulation induction in the same cycle. Patient had history of laparoscopic evaluation 6 months back and found to have bilateral ovaries adherent to uterus.

On examination pulse rate was 100 beats per minute. Blood pressure was found to be 110/70mmHg. On examination there was abdominal distension and tenderness. On evaluation haemoglobin was 7gm/dl and beta hcg was found to be negative.

Ultra sonogram abdomen and CT abdomen showed gross hemoperitoneum, Large hematoma in pelvic region and cystic structures in right adnexal region with eccentric high density. ? Ovarian cyst.

After resuscitative measures and anaesthesia fitness patient was taken up for emergency laparotomy under general Anaesthesia. Intraoperatively there was hemoperitoneum. Uterus was normal in size. Endometriotic deposits seen over the posterior surface of uterus and ovary. Diffuse oozing was there from uterus and both ovaries. Haemostasis achieved by cauterisation.

3 pint PRBC given and post operative haemoglobin was 8.8gm/dl. Post operative period was uneventful. Patient was discharged on post operative day 4 in stable condition.

Case 3: Ovarian Cyst Rupture with Hemoperitoneum

22 Year old unmarried female presented to casualty with complaints of

abdominal pain for 1 day and was associated with vomiting.

On examination pulse rate was 90 beats per minute, blood pressure was 110/70mmHg. On examination generalized tenderness was present which was predominantly over left lumbar region.

On evaluation haemoglobin was 10.5gm/dl and platelet was 2.53L/cumm. USG Abdomen and pelvis shows bulky right ovary mild to moderate ascites with internal echoes. Possibility of cyst rupture to be considered.

MRI pelvis suggestive of right adnexal / para ovarian hematoma and moderate hemoperitoneum., probably secondary to ovarian cyst rupture.

After obtaining anaesthesia clearance, patient was taken up for emergency diagnostic laparoscopy and peritoneal lavage under general anaesthesia. Intra operative findings :- uterus normal in size, left ovary and tubes were normal. Right ovary was bulky. There was moderate hemoperitoneum, blood collections under the surface of liver. General surgery intra operative opinion obtained. No other bleeding source identified. Bowel, liver and spleen visualized and found to be normal. Bilateral flank drains were kept, left in pelvis and right JP drain kept sub hepatic.

Post operatively patient had ileus on day one, CT abdomen with angiogram was taken and showed bulky appearing uterus. No evidence of bleeding. Patient symptomatically better by POD 2 and got discharged on POD 5.

Case 4: Trauma-Induced Ruptured Ovarian Teratoma

32 year old female presented to casualty with history of road traffic accident, fall from scooter. CT was taken which showed free fluid in abdomen and ruptured teratoma in left ovary. No complaints of abdominal pain or bleeding per vagina.

On examination pulse rate was 88 beats per minute and blood pressure was 110/70mmHg. Per abdomen was tense and there was no guarding rigidity or tenderness. On evaluation haemoglobin was 12.1 gm/dl platelet was 1.73L/cumm and beta hcg was found to be negative.

After pre operative evaluations and anaesthesia clearance patient was taken for emergency laparotomy with left ovarian cystectomy. Intra operatively there was ruptured left ovarian teratoma. Peritoneum showed free fluid and left ovarian teratoma of size 9*9 cm with cystic rupture seen. Cystectomy done. Right ovary, tubes and uterus were normal. Patient discharged on POD 3.

Case 5: Hemoperitoneum Managed Conservatively

33 year old married P1L1, previous LSCS 5 months back, came with complaints of pain abdomen for one day. There was no bowel or bladder symptoms or fever. Patient had history of interstitial lung disease was on steroids but not on regular medications and has breathlessness on exertion.

On admission pulse rate was 108 beats per minute and blood pressure was 120/56 mmHg. SpO2 was 85% in room air and 99% with oxygen. On examination chest was clear, per abdomen soft, not distended, not tense or tender and no mass palpable. On evaluation haemoglobin was 14.7 gm/dl and platelet count was 3.53 L/cumm. Serum Beta Hcg was negative.

Ultrasound abdomen and pelvis shows a well defined cystic structure with hyperechoic rim in POD measuring 1.6 * 1.3cm. No internal

/peripheral Doppler flow seen. Mild free fluid in POD with internal echoes-s/o hemoperitoneum. CT was also suggestive of hemoperitoneum. The hemoperitoneum may be due to Corpus luteal cyst rupture.

Case discussed with anaesthetist. In view of high risk for general anaesthesia due to interstitial lung disease and as the patients is stable conservative treatment has been decided.

CBC and vitals were monitored. There was no haemoglobin fall and vitals were stable.

Patient seen by pulmonologist and treatment for lung disease was started. In the following ultrasound abdomen and pelvis hemoperitoneum was resolving and patient got discharged after 6 days.

DISCUSSION

There was definite cause for hemoperitoneum in two cases. In one case endometriosis could be the reason but there was no definite bleeding point. In another case no source of bleeding could be identified. In all 5 cases there was no coagulation defect.

In Case 1, the rupture of an ovarian cyst caused substantial hemoperitoneum and hemodynamic instability. This case emphasizes the importance of maintaining a high degree of suspicion for gynaecological causes of abdominal pain (1)(3), especially in young women. Prompt resuscitation and transfusion protocols are vital for stabilizing the patient's condition prior to emergency surgical procedure (2). The successful outcome of this case demonstrates the usefulness of laparotomy in reducing bleeding and restoring haemostasis.

Endometriosis-related complications, as seen in Case 2, present unique challenges due to the disease's diffuse nature and potential to cause widespread pelvic adhesions. In these cases, surgical examination may find unanticipated sources of bleeding, necessitating exact haemostasis measures (5). The recurrence risk of endometriosis-related bleeding underlines the importance of post-operative specific management and thorough monitoring to avoid recurrent issues.

Ovarian cyst rupture, as seen in Case 3, often presents with nonspecific symptoms, making diagnosis challenging. Imaging modalities such as ultrasound and MRI play a crucial role in identifying the extent of hemoperitoneum and guiding surgical decision-making (7). Intraoperative findings of moderate hemoperitoneum necessitate thorough exploration to ensure haemostasis and prevent post-operative complications such as adhesions and abscess formation.

Trauma-induced ovarian teratoma rupture, as shown in Case 4, emphasizes the need of considering gynaecological etiologies while evaluating abdominal injuries. While ovarian teratomas are usually benign, rupture can cause peritoneal irritation and haemorrhage, demanding emergency surgical intervention (6).

The other case was of a married previous caesarean section patient with hemoperitoneum conservatively managed mostly due to Corpus luteum cyst rupture.

These cases highlight the multidisciplinary nature of managing acute gynaecological emergencies, which necessitates teamwork among gynaecologists, general surgeons, and anaesthetists. Furthermore, patient counselling about the possibility of recurrence and importance of long-term follow-up is essential to ensure optimal outcomes as well as prevent complications in the future.

Further research is required to explore novel diagnostic techniques and treatment options for improving outcomes in acute gynaecological emergencies, particularly ovarian cyst rupture and endometriosis-related issues.

Hemoperitoneum is a serious condition often requires urgent medical attention. Peritoneal cavity can hold an enormous amount of fluid/blood. It is hard to tell how much or how fast patient is losing blood when it is inside the cavity. If not attended in right time it could lead to life threatening blood loss. Symptoms of hemoperitoneum vary depend on the cause.

Traumatic injuries and ectopic pregnancies are among the most common causes of hemoperitoneum. Bleeding disorders and chronic

diseases can predispose a person for hemoperitoneum.

Imaging studies (USG/CT)(7) help to diagnose hemoperitoneum, also help to localise the source of bleeding.

Management depends on amount of bleeding and cause of bleeding. Blood and blood products play an important role. Laparotomy /laparoscopy is warranted in most of the cases to secure the bleeding point. End result depends on the basic pathology and promptness of management.

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