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RESEARCH ARTICLE

CASE REPORT: SPONTANEOUS HEMOTHORAX- A RARE PRESENTATION OF ECTOPIC PREGNANCY

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Abstract

Common presenting symptoms of an ectopic pregnancy are pain abdomen, amenorrhea, vaginal bleeding and syncope some times. Although it is typically confined to pelvis, rare manifestations involving the thorax, abdomen or pericardium have been documented(3-6). We are reporting a case of ruptured ectopic pregnancy presenting mainly as hemothorax. A 27 Years old female patient P2L2A2, Previous 2 LSCS not tubal ligated with history of oligomenorrhea, initially complained of pain abdomen, vomiting and syncopal attack for which she received some pain killer and IV fluids at some local hospital. Over next 3 to 4 days, she complained of increasing breathlessness and cough. Her chest X- RAY (figure- 1) and chest CECT was done that showed right side massive pleural effusion with collapse of right lung and left side shift of trachea and mediastinum. In view of these findings ICT was inserted that drained 2 liters of dark hemorrhagic fluid. CECT abdomen showed an irregular mildly enhancing, solid, cystic lesion of size 7.5X 4.8X 5.6 cm in right adnexal region with mild to moderate fluid collection in peritoneal cavity. UPT was positive, Serum beta HCG was 1286 m IU/ml. Laparotomy was done in view of ruptured ectopic pregnancy with hemoperitoneum with associated hemothorax. Intraoperatively approx. 1500cc hemoperitoneum (Figure-4) found. In postop period ICT Drain fluid changed to serous and drained only 150cc in next 24 hrs (Figure-5). This is a rare case of spontaneous hemothorax precipitated by hemoperitoneum secondary to ruptured tubal ectopic pregnancy. There have been few case reports of hemothorax associated with ectopic pregnancy in literature.

Introduction:-

An ectopic pregnancy is one in which the fertilized ovum is implanted and develops outside the normal endometrial cavity, i.e. in the fallopian tubes, cervix, ovary or in the abdominal cavity. Commonest site is the fallopian tube. About 1 in 100 to 150 pregnancies are ectopic. The risk factors are age, history of infertility, smoking, history of ectopic pregnancy, pelvic inflammatory disease and use of intrauterine device (1,2).

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Case Presentation:-

A 27 Years old female patient P2L2A2, Previous 2 LSCS not tubal ligated with history of oligomenorrhea, initially complained of pain abdomen, vomiting and syncopal attack for which she received some pain killer and IV fluids at some local hospital. Over next 3 to 4 days, she complained of increasing breathlessness and cough. Her chest X-RAY (figure-1) and chest CECT was done that showed right side massive pleural effusion with collapse of right lung and left side shift of trachea and mediastinum. Left lung normal. In view of these findings ICT was inserted that drained 2 liters of dark hemorrhagic fluid. CECT abdomen showed an irregular mildly enhancing, solid, cystic lesion of size 7.5X 4.8X 5.6 cm in right adnexal region with mild to moderate fluid collection in peritoneal cavity, uterus normal, bilateral ovaries not separately seen. 4 units of blood transfused to correct anemia (Hb 5.8 gm%). Then she was referred to Mahatma Gandhi Hospital in view of massive hemothorax for further management as no definite cause for hemothorax could be identified. There was no history of recent trauma or any chronic medical illness.

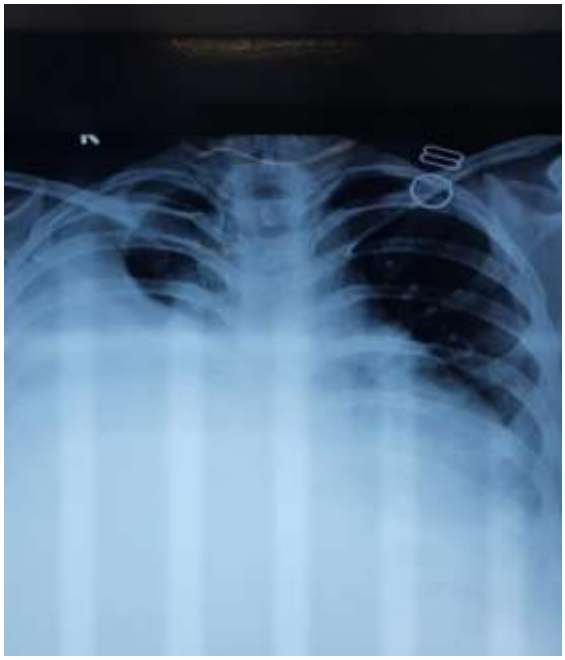

Figure 1:- Chest X-ray showing right sided pleural effusion (before intercostal tube drainage).

On presentation at our center patient was conscious, oriented with time, place and person, afebrile. Her Blood pressure was 110/60mmHg, pulse rate 146/min, respiratory rate was 22 breaths/min and an oxygen saturation of 96% on room air. Pallor was present. Respiratory examination showed diminished breath sounds on right lower lung field. Abdomen was soft, no guarding or rigidity, bowel sounds were present, mild tenderness was present on deep palpation in right lower abdomen. She was having normal oral intake, passing flatus and stools normally and her hourly urine output was normal. On PV examination uterus was normal size, fullness was present in right fornix, left fornix was free.

Her complete blood count showed hematocrit 21%, Hb 6.5 gm%, leucocyte count of 22750cells/microliter with normal platelet count. UPT was positive, Serum beta HCG was 1286 m IU/ml, coagulation profile was normal and normal kidney & Liver function test. Bedside USG abdomen revealed mild to moderate ascites in left and right flanks and empty uterine cavity.

ICT Drain hemorrhagic fluid was sent for cell count, cytology and culture to rule out any malignant and infective pathology which revealed 70% neutrophils, 30% lymphocyte in the background of hemorrhage and mesothelial

cells, cytology was negative for malignant cells and culture was sterile. Fluid LDH was 1233.2 U/L and acid- fast stain of bronchoalveolar lavage revealed no organism.

During workup she was given 2 units of PRBC to correct anemia. ICT drained approx. 3000ml of hemorrhagic fluid (Figure-2) in 24 hrs. CECT thorax, abdomen (Figure-3) and pelvis was performed that showed mild right sidedpleural collection with area of collapse consolidation and linear atelectatic /fibrotic bands in adjacent right lower lobe, an ill-defined heterogenous appearing mass lesion in right adnexa with adjacent tubular cystic area, marked soft tissue stranding in pelvis with mild to moderate hemoperitoneum predominantly in pelvic region, bilateral paracolic spaces, perihepatic and perispleenic regions. Meanwhile cardiothoracic surgery and pulmonologist opinion was taken in view of unexplained massive hemothorax to rule out any primary lung pathology.

Figure 2:- Hemorrhagic fluid in ICT Drain preoperatively.

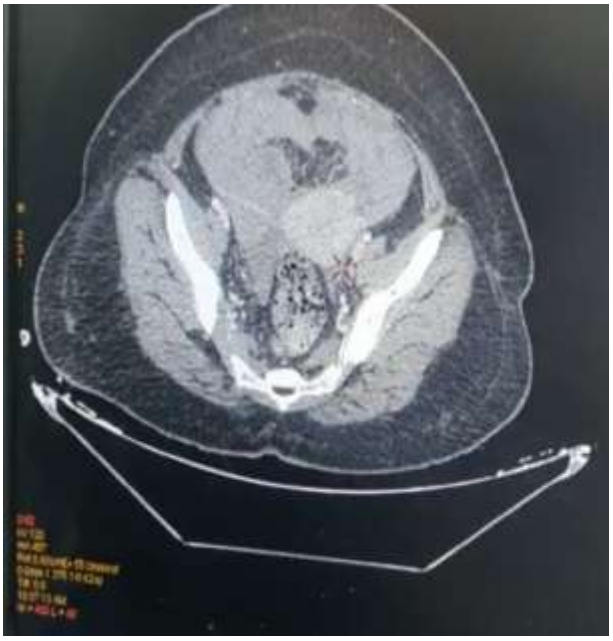

Figure 3:- CECT Abdomen showing ill defined mass lesion in Right adnexa.

USG guided paracentesis was performed by interventional radiologist and similar hemorrhagic fluid as that of ICT, was aspirated. Decision of laparotomy was taken in view of ruptured ectopic pregnancy with hemoperitoneum with associated hemothorax. Intraoperatively approx. 1500cc hemoperitoneum (Figure-4) found. Omentum was adherent over the right tube and ovary. After removal of omental adhesions right tube and ovary was seen, tube was ruptured at the antimesenteric border. Right salpingectomy was done with removal of ectopic gestational tissue. Vigorous peritoneal lavage performed. Abdominal drain inserted. Gentle palpation of undersurface of diaphragm done to locate for any defect but none found.

Figure 4:- Intraoperative picture showing hemoperitoneum.

1 unit PRBC and 4 units FFP were given in postoperative period. In postop period ICT Drain fluid changed to serous and drained only 150cc in next 24 hrs (Figure-5). The drainage gradually subsided. ICT Drain was removed on postop day 6 after taking opinion of pulmonologist. Post operative chest X-RAY showed clear lung fields (Figure-6). Chest physiotherapy and spirometry given postoperatively, along with correction of anemia. Histopathology report of specimen showed chorionic tissue consistent with products of conception.

Figure 5:- Serous fluid in ICT drain post operatively.

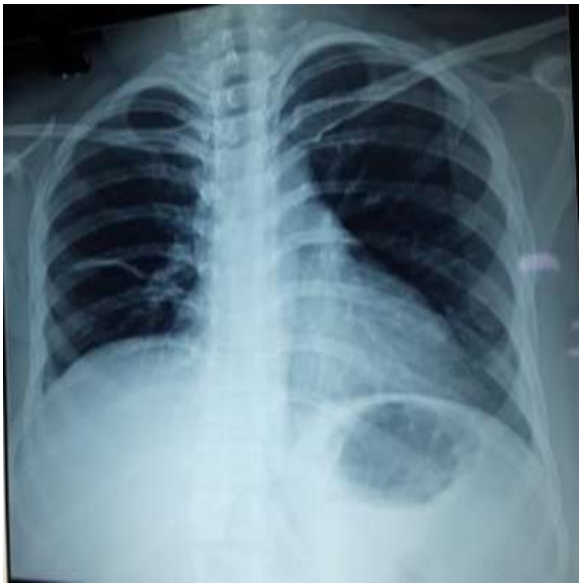

Figure 6:- Normal chest x ray (post operatively).

Discussion And Conclusion:-

The differential diagnosis for hemorrhagic pleural effusion and hemoperitoneum includes trauma, infections, inflammatory etiologies, coagulation disorders, vascular disease, malignancy, atypical presentation of endometriosis. our patient was appropriately worked up to rule out all known possible causes. This is a rare case of spontaneous hemothorax precipitated by hemoperitoneum secondary to ruptured tubal ectopic pregnancy. There have been few case reports of hemothorax associated with ectopic pregnancy in literature.

The possible mechanism for hemothorax in our case might be due to direct communication through diaphragmatic defect. Sometimes smaller defects may remain occult when located in an area of the diaphragm protected by the liver. These defective areas may lose their protection when pneumoperitoneum, ascites, or hemoperitoneum separates the liver and the diaphragm(7). These congenital diaphragmatic holes are frequently seen in the tendinous portion of the right diaphragm and less frequently seen in the left diaphragm, which is thicker and more muscular than the right. Moreover, on the left diaphragm, Omentum or bowels usually protrude through the opening and seal the passage of fluid.

Other hypothesis is that blood would have passed along the connective tissue sheaths of esophagus and great vessels and after passing through the esophageal hiatus into the mediastinum, ruptures into the pleural space(8). On review of literature, in one case hemothorax occurred due to implantation of ectopic pregnancy on the diaphragm(9). This case represents a rare complication of ectopic pregnancy thus highlighting the high index of suspicion of ectopic pregnancy in women of reproductive age and its timely management.

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