PERFORATED OVARIAN DERMOID

by

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and

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Introduction

Ovarian cysts are liable to undergo certain complications which may require immediate surgical intervention. These are haemorrhage, torsion and perforation. Perforation as a result of trauma occurs more frequently than spontaneous rupture which is exceedingly rare. Acute rupture of an ovarian dermoid cyst may occur after trauma, during pregnancy or parturition. Spontaneous rupture into the peritoneal cavity is the rarest complication which an ovarian dermoid can undergo. A case of spontaneous intraperitoneal rupture of a dermoid cyst of the left ovary presenting as acute abdomen in a postmenopausal woman is reported.

CASE REPORT

A 48-year-old postmenopausal woman was admitted to the casuality ward of Willingdon Hospital, New Delhi, on 10th May 1971 with the complaints of pain in the abdomen, and absolute constipation of three days' duration and vomiting of two days' duration. The pain in the abdomen was of sudden onset, in the epigastric and umbilical regions and later settled down in the right lower abdomen and was associated with repeated vomitings. There was no history of injury to the abdomen. She was admitted one year earlier in some other hospital and was advised operation for some abdominal tumour about which no records were available.

She was well built, toxic and dehydrated. Her blood pressure was 110/70 mm. of Hg. Pulse 120/minute and temperature 103.6°F. There was generalized abdominal distension. The abdomen was tender all over but more in the right lower quadrant. Rebound tenderness was present all over the abdomen. Liver dullness was not obliterated and peristaltic sounds were absent. Rectal examination did not reveal any abnormality. Gynaecological examination revealed, cystocele and rectocele. Both the fornices were free. No other gynaecological pathology was detected. A provisional diagnosis of generalized peritonitis secondary to perforated appendix was made.

Investigations

Total WBC count was 12,600/c.mm. with 80% polymorphonuclear leucocytes. Plain x-ray of the abdomen showed distended coils of intestine and multiple fluid levels.

Emergency laparotomy was done with a right paramedian incision. Very thick odourless greenish-yellow pus like material was present in the peritoneal cavity. A pedunculated cystic mass of 15 x 20 cms. arising from the left ovary was found lying on the vertebral column. After the cyst was delivered out, one perforation of 2 cms. in size was found on the right lateral aspect, 10 cms. from the pedicle. The cyst was excised after transfixing the pedicle. Rest of the exploration did not reveal any abnormality except that the right ovary was atrophic. Epigastric hernia was repaired from inside. The abdomen was closed after inserting a corrugated rubber drain after a thorough peritoneal toilet. The cut section of the cyst showed hair. Patient had an uneventful post-operative period and was discharged on 20th May 1971.

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Pathological Examination

Gross Examination: Specimen consists of an already cut open cyst like structure containing hair, a tooth and some sebum like material. It was 15 x 10 cms. in size.

Microscopic Examination: Microsection shows that the cyst wall is covered by stratified squamous epithelium which shows acanthosis, hyperkeratosis with flattening of rete pegs (Fig. 1). The subepidermal tissue shows fibrocollagenous tissue infiltrated diffusely by chronic inflammatory cells, mostly lymphocytes, round cells and plasma cells (Fig. 2). The cyst wall on one side is visible which is lined by tall columnar epithelial cells. At places there are cholesterol clefts, few pseudoxanthoma cells and fat cells (Fig. 3). No other dermal appendages could be made out. In view of the above gross and microscopic findings the histological picture is consistent with that of an infected dermoid cyst.

Discussion

Perforation as a result of trauma occurs more frequently than spontaneous rupture which is exceedingly rare. Acute rupture of an ovarian dermoid cyst may occur after trauma either during pregnancy or parturition as reported by Schnack (1966). Chronic rupture of an ovarian cyst occurs very rarely. It forms adhesions with the neighbouring viscera and ruptures into these. Many case reports are available of rupture of an ovarian cyst into the vagina, rectum, rectosigmoid and urinary bladder. Datar (1954) reported an ovarian dermoid cyst which ruptured into the urinary bladder and produced a hair growing bladder diverticulum and gave rise to a vesical calculus.

Spontaneous rupture into the peritoneal cavity is the rarest complication which an ovarian dermoid can undergo. There is no satisfactory explanation why this occurs without any external injury. It cannot be always due to rising tension in a large cyst.

Probably in our case the cyst got infected and the resultant rise in the intracystic tension weakened the cyst wall resulting in perforation. The diagnosis was made only at laparotomy. The contents of the dermoid cyst which were rich in sebaceous material were a strong—irritant to the peritoneal cavity and hence produced a picture of peritonitis with paralytic ileus. Small quantities of this material remaining in the peritoneal cavity even after peritoneal toilet could lead to formation of granulomatous masses with adhesions leading to intestinal obstruction after a few years.

Jejurkar *et al* (1965), have reported a case of spontaneous rupture of an ovarian dermoid cyst with peritonitis and paralytic ileus and they quoted another report by Lopez *et al* (1961). According to Jejurkar *et al* (1965), the contents of dermoid cyst which are rich in sebaceous material are a strong irritant to the peritoneal cavity (even after peritoneal toilet) and lead to formation of granulomatous masses with adhesions. They may present great diagnostic difficulties and problem for treatment, especially if a second operation becomes necessary after a few years. We have no follow-up of this patient.

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See Figs. on Art Paper IV