
MESENTERIC CYST-OVARIAN IMPLANT SYNDROME; CASE REPORT

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Abstract

Mesenteric cyst ovarian implant syndrome have been rarely reported in the literature, we report the first case that occur in young female following trauma and it is the first case in which the ovarian tissue get implanted higher up in the jejunal mesentery out side the pelvis.

Introduction

Mesenteric cysts are one of the most rare intra-abdominal tumours¹. These cysts sometimes offer difficult clinical problems because they present on palpation as abdominal masses. On the other hand ovarian remnant syndrome refers to symptoms associated with small piece of ovarian tissue remaining after oophorectomy^{2,3}.

A 19-year old unmarried female presented with abdominal tightness and discomfort for the last two months. On examination, she was healthy-looking with a mobile, soft and non-tender left loin mass.

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Ultrasound revealed abdominal mass measuring 8.5×6.5cm giving a differential diagnosis of mesenteric cyst, pedunculated ovarian cyst or hydatid cyst. All other investigations were normal.

The patient gave history of falling from a height on a sharp object 3 years ago. It penetrated the right ischio-rectal fossa into the abdominal cavity resulting in “acute abdomen”. At that time, laparotomy revealed haemoperitonium with avulsion of the right ovary from its attachment. Eventually, right oophorectomy was performed.

A decision for exploratory laparotomy was made to verify the nature of this abdominal mass. It was carried out through the same midline incision and revealed a cystic mass in the mesentery of the jejunum with adherent small bowel loops over it. Enucleation of the cyst

was done without injury to the mesenteric vessels after separation of the bowel loops. The pelvic organs were separated completely from the abdominal cavity by bowel adhesions rendering examination of pelvic organs practically impossible.

Histopathological examination of the cyst revealed a wall containing multiple cystic follicles and luteinized granulosa cells of the ovary, i.e. active ovarian tissue, giving the diagnosis of mesenteric cyst ovarian implant syndrome (figure 1).

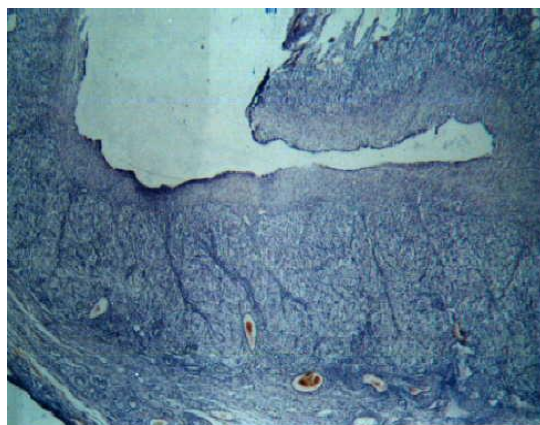


Fig 1. Histopathological exam of cystic wall (haematoxylin & Eosin stain × 400)

On the 8th postoperative day, stitches were removed and the patient was well. Ultrasound examination (U/S) was performed to check the validity of left ovary which harbored a small cyst about 3cm in diameter.

Discussion and comments

Although mesenteric cysts are rare, many classifications have been advocated for it. The most widely used one is based on its origin⁴, as follows:

- 1- Those arising from sequestered lymphatic channels.
- 2- Those derived from pinched off the enteric diverticulum of the developing foregut and hindgut.

3- Those derived from the urogenital ridge or its derivatives.

4- Those derived from walled off infections.

5- Those of malignant origin.

Another classification of mesenteric cysts is based on etiological basis⁵.

- 1- Embryonic and developmental cysts
- 2- Traumatic and acquired cysts.
- 3- Infective and degenerative cysts.
- 4- Neoplastic cysts.

On the other hand, features of ovarian remnant syndrome are^{2,3}.

- 1- History of oophorectomy & salpingo-oophorectomy, usually bilateral
- 2- A small amount of ovarian tissue is inadvertently left behind.
- 3- This ovarian tissue is associated with clinical symptoms such as pelvic pain and / or dyspareunia.
- 4- Removal of the ovarian remnant results in clinical improvement.

Experiments on cats⁶ revealed that the cortical ovarian tissue which has been separated from its major blood supply may undergo necrosis, cystic degeneration, neoplastic change or it may remain functional and cause the symptoms of ovarian remnant syndrome.

This syndrome should be considered in all patients presented with genitourinary symptoms or a pelvic mass following bilateral salpingo-oophorectomy particularly those with endometriosis or chronic pelvic pain disease⁶. On our thorough review of literature we found only 5 patients with mesenteric cyst ovarian implant syndrome^{7,8,9,10} to which we add our case.

Case 1 was reported by Wilder and Bames⁷ (1953) in a 46-year old patient with history of multiple pelvic operations and bilateral oophorectomy who presented with pelvic pain 12 months following surgery. Laparotomy revealed a terminal ileum mesenteric

cyst which proved, histopathologically, to be a corpus luteal cyst.

Case 2 was reported by Wharton⁸ (1959) in a 20-year old patient with history of hysterectomy and bilateral oophorectomy due to choriocarcinoma who died 6 months later. Autopsy revealed sigmoid colon mesenteric cyst which proved, histopathologically, to be a cystic ovarian cyst.

Case 3 was reported by Muram and Drouin⁹ (1982) in a 42-year old patient with history of multiple pelvic operations and bilateral oophorectomy with endometriosis. She present 12 months later with urinary frequency and urgency. Laparotomy revealed sigmoid colon mesenteric mass pressing on the urinary bladder and histopathology showed that it was cystic ovarian tissue.

Case 4 was reported by H. Payan and Gilbert¹⁰ in a 36-year old patient with history of multiple pelvic operations, right oophorectomy and partial left oophorectomy. She presented with abdominal mass five months later and laparotomy revealed a distal descending colon mesenteric cyst which proved to be a haemorrhagic corpus luteal cyst.

Case 5 was also reported by H. Payan and Gilbert¹⁰ in a 44-year-s old patient with multiple pelvic operations, left oophorectomy and partial right oophorectomy who presented with pelvic pain 4 months later. Laparotomy revealed a sigmoid colon mesenteric cyst which proved to harbor ovarian tissue with corpus luteal cyst.

The present cases reported in 19 years old patient with history of previous trauma and right oophorectomy. Laprotomy revealed jejunal mesenteric cyst which proved to be functional ovarian tissue. Most patients had multiple pelvic surgical procedures including operative procedures of the ovaries and it's seems that partial resection of the ovary such as removal of an ovarian cyst, may increase the incidence of ovarian implant syndrome¹⁰. However, the low incidence of ovarian implant syndrome suggests that the normal pelvic soft tissue does not seem to accept ovarian implants. It appears that the soft tissue of the pelvis or lower abdomen must be altered by means of fibrosis, adhesions, chronic inflammation, endometriosis or tumours to be able to accept the ovarian implant and promote its growth. In the present case it's seems that the penetrating object resulted in a raw area in the mesentery to which a piece of the avulsed ovary get implanted in and grow.

There are no diagnostic facilities available to diagnose this condition prior to surgery and microscopical exam as neither the mesenteric cyst nor the ovarian implant nature of such lesions has a special feature that leads to its identification.

Treatment is usually surgical and some suggest the use of radiotherapy but not considered justified by others. No recurrence has been reported in follow up studies^{6,11}.

The reason for registering this case is to attract attention especially for gynecologist and general surgeons for better understanding, recognition and possible prevention of this disorder.

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