

# TWISTED BROAD LIGAMENT CYST

## A Case Report

by

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Cysts of the broad ligament are regarded as developing from the mesonephric duct and its related structures (Gardner *et al.*, 1948, 1957). These cysts are known to be much less liable to get twisted than ovarian cysts. The following is report of a case of broad ligament cyst which had twisted along with the tube and the ovary.

**Case:** S, a married woman of 35 years, was admitted into the Jubilee Mission Hospital, Trichur, for the complaints of abdominal pain and dysuria of 22 days' duration. She had noticed at this time a swelling in the hypogastrium. Pain was of sudden onset and was intermittent. Frequency of micturition was normal. Bowels moved regularly and she had no vomiting.

**Menstrual history:** Menarche at 14 years. Periods regular, 5/28-30; no dysmenorrhoea. Last menstrual period was 9 days prior to admission.

**Obstetrical history:** Married at the age of 18. One pregnancy at the age of 20 which ended in a full term natural delivery. She is separated from her husband since 4 years after marriage.

**On examination:** Patient was not anaemic. Temperature 98°F. Pulse 80/mm. B.P. 140/100 mm. Hg. Heart and lungs N.A.D.

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There was a large cystic swelling in the hypogastrium, a little to the right side of the midline reaching 1" below the level of umbilicus. Slight tenderness on deep palpation.

**On pelvic examination:** Uterus was of normal size and shifted to the right. Large cystic, non-tender mass in the left adnexa was made out. Cervix, healthy. Clinical diagnosis was twisted ovarian cyst.

**Laboratory tests:** Hb. 12 gms. W.B.C. Total:—10,000/cmm. Diff. P. 60%, L. 30%, E. 10%; urine was normal.

**At laparotomy:**— A large cyst was seen on the left side, twisted once on its pedicle. It was roughly 8" in diameter and contained blood-stained fluid. The ovary was in the wall of the cyst. The tube appeared dark brown. Uterus, right tube and right ovary were normal. Left salpingo-oophorectomy was done with removal of the cystic tumour.

The specimen consisted of a fallopian tube, black in colour, and a cyst measuring 8" in diameter, containing clotted blood and dark coloured fluid, with the ovary on its surface. The cyst wall showed areas of irregular thickening. The ovary was black in colour in most parts with the hilar region alone whitish in colour (Fig. 1).

Sections from most parts of the cyst wall showed haemorrhage in the wall, and the blood vessels showed varying degrees of congestion. In some parts of the wall the blood vessels showed fresh thrombi, and in others, canalising, organising thrombi (Fig. 2). The ovary was almost practically replaced by necrosis and haemorrhage. Very little normal ovarian structure was

found. Sections of one of the nodular areas of the cyst wall showed a nodule of adrenal cortical tissue. The central part of the nodule showed necrosis, while the peripheral surviving tissue was made up of cells of the zona fasciculata type with evidences of degeneration (Fig. 3).

### Discussion

Broad ligament cysts have been classified as fimbrial and parovarian.

Parovarian cysts are classically considered to arise from the parovarium (also known as the organ of Rosenmuller and epoophoron) which is a vestige of the upper part of the Wolffian body, placed in the mesosalpinx between the tube and the hilum of the ovary. This corresponds to the epididymis in the male. The main canal is placed parallel to the fallopian tube and several parallel or divergent tubules run from this canal towards the hilus of the ovary. These tubules and the longitudinal canal at the lateral end end blindly. The cysts of Morgagni are distensions at the lateral end of the main canal. The parovarian cysts are classically considered to arise from the main canal itself or from any of the tubules, perpendicular to this canal. The cysts often reach large proportions when the main duct is involved.

However, it is also believed that most of the broad ligament cysts originate from the ovary which extend outward as they enlarge between the broad ligament and the mesovarium (Hughesdon and Symmers 1966). A cyst of any origin placed where the mesovarium and the broad ligament are continuous will either move upward or downward during its growth, because it will either have to surmount or underlie the sling con-

stituted by the uterine tube, the suspensory ligament of the ovary, the ovary itself, the round ligament of the ovary and the uterine cornu. If the cyst overlies the sling it separates the layers of the broad ligament and moves laterally when it is known as a fimbrial cyst, not because of its origin from the fimbria but because of its location. If the cyst underlies the sling it moves downwards and medially with the fallopian tube stretched over the roof of the cyst. The cysts contain clear fluid and are lined by a single layer of cuboidal epithelium and may have in their wall smooth muscle and connective tissue of the nature of ovarian stroma (Hughesdon and Symmers 1966).

The interest in this case stems from 3 features:

(1) Twisting had occurred in relation to a parovarian cyst.

(2) The pain had lasted for 21 days.

(3) Presence of adrenal rests.

Twisting of the parovarian cysts is not common. However, Herbut (1953) lists this as a complication in pedunculated large or small cysts. McGowan (1964) studied 78 cases of torsion of ovaries, fallopian tubes and broad ligament. He found that 36 of the 78 cases gave a past history of pain and suggested that spontaneous twisting and untwisting may be possible. In the present case it appears that the fallopian tube and the broad ligament with the cyst underwent either progressive torsion, or was subjected to repeated twisting and untwisting. This process had also involved the ovary which had undergone infarction. This is supported by

the thrombi in the blood vessels in various phases of development and organisation.

Adrenal rests in the broad ligament and ovaries have been found in 20% of normal women, and these may be functionally active like the normal adrenal cortex (Morris and Scully 1958). In structure they resemble the adrenal cortex.

#### Summary

A case of parovarian cyst which had undergone twisting with evidence of either a continuously progressive torsion or repeated twisting and untwisting for about 21 days is described. The wall of the cyst also showed adrenal rests.

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*Figs. on Art Paper III*