ADENOMATOID TUMOUR OF BROAD LIGMENT

(A Case Report)

by

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Non-neoplastic small cysts are common in the broad ligment as against neoplastic growths. Myoma arising from masculature of ligment is one of the common tumours Lipoma, adenomyoma, fibroma are rare tumours, whereas adenomatoid tumour is the rarest. The term "adenomatoid tumour" was coined by Golden and Ash in the year 1945 for certain small circumscribed benign neoplasms of the genital tract which were previously described under a variety of terms like lymphangioma, reticulo-endothelioma, mesothelioma and angiomatoid tumour. Lower pole of epididymis of the testis in the male and fallopian tube in the female are the common sites, while the ovary and the broad ligment are unusual sites for its occurrance. In our institution, in the last 25 years, we have come across only two such tumours, one in the male genital tract and the other in the female genital tract. The tumour reported in this paper was situated in the broad ligment, an unusual site, and the probable histogenesis is discussed.

Case Report

Patient aged 25 years, was admitted in Medical College Hospital, Nagpur, for oligomenorrhoea and a lump in the abdomen, for the last 2 years. She attained menarche at the age of 14 years. She had 3 full term normal deliveries; last delivery was 3 years back and was normal. There was slight microcytic hypochromic anaemia.

On abdominal examination a cystic irregular, non-tender mass upto the umblicus arising from the pelvis was felt Abdominal veins were not engorged.

On vaginal examination uterus could not be made out separately from the abdominal cystic mass. Movements of the mass were communicated to the cervix. Mass felt in all fornices. Cervix appeared normal.

Laparotomy was performed. The mass was bilobed cystic, situated within the two layers of the right broad ligment, and extending upto the umbillicus. Uterus was pushed to the left side. Right adenexa was adherent to the posterior surface of the tumour. Both fallopian tubes were normal. There was a small follicular cyst on the right ovary, while the left ovary was normal. No uterine leiomyoma was seen. After separating the right adenexa from the tumour, it was completely enucleated by incising the anterior layer of broad ligment.

Histopathology

Gross Appearance: A cystic well encapsulated yellowish mass about 12 x 8 cm. (Fig. No. 1) with smooth surface. Papillary projections were not present. On cutting the tumour, multiple micro-cysts giving a honey-combed pattern with cystic spaces ranging from 0.2 cm.—0.5 cm. were seen. Mucinous-like material was present in

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spaces. Adequate sections were taken from different parts of tumour and were studied after staining.

Microscopic Appearance: There were irregular spaces lined by flattened epithelium and solid cords of cells in connective tissue stroma resembling epithelial cells. At places it formed glandular pattern. Cytoplasmic vacuolation with eccentric nuclei were prominant features of cells in solid cords. At places they coalesed to form cystic spaces. Eosinophilic material was present in the lumen of spaces. Stroma varied in composition and density and was mostly collagenous in nature (Fig. No. 2). Two sections showed lymphoid tissue without germinal follicle (Fig. No. 3). Spindle-shaped cells resembling ovarian stroma were seen at the periphery of the tumour, where the right ovary was adherent. Muci-carmine stain was done to demonstrate presence of mucin. Periodic Acid Schiff stain shows positive material in the cystic spaces.

Discussion

Adenomatoid tumours are regarded as benign tumours. The complexity of its cellular pattern is suggestive of malignant adenomatous lesion, but no recurrence after removal or metastasis favours its benign character. In female genital tract the incidence of this tumour is equal to that in the fallopian tube and uterus (Teel, 1958). Fallopian adenomatoid tumours are associated with uterine leiomyomas, and are usually incidental findings as they are small and circumscribed. On the other hand, these tumours in the ovary or in the broad ligment are larger varying from 7 to 9 cmm. Present tumour was large (12 x 8 cm.) and located in the broad ligment.

The histogenesis of this tumour is a controversial point. The initial popular concept was of endothelial origin. The angiomatous appearance and presence of lymphoid follicle within many tumours suggested that probably the tumour was a lymphangioma (Sanes *et al*, 1939). Morehead (1 46) designated the tumour as "Angiomatoid tumour" and considered the possibility of tumour arising from the mesenchymal cells which make imperfect attempts at the formation of lymph-vessels. Recent investigators completely disregard this concept, as intra-cytoplasmic vacuoles and brush borders are not the features of angioma in other situations, (Golden and Ash, 1945; Pauerstein *et al*, 1968). Moreover, the stainable material present in lymphangioma is lacking in these tumours.

Epithelial appearance of cells favours the mesonephric histogenesis (Teel, 1954; and Teilum, 1954). However, as pointed out by Sundarrao Sivarao (1953) mesonephric remenants are abundant in the female genital tract, whereas adenomatoid tumours are quite rare. Also these mesonephric remnants are present in the cervix and the vagina, whereas adenomatoid tumours are common in the fallopian tube and cornu of uterus.

Masson *et al* (1942) are the proponents of mesothelial origin. Mesothelial cells are known to assume epithelial appearance and can also show intra-cytoplasmic vacuolation with mucin-carmine positive material, (Efskind, 1952). Gland-like spaces, with cells showing brush border suggested mesothelial origin, (Bailey *et al*, 1955; Lee *et al*, 1950). The argument against this theory being absence of adenomatoid tumour in pleural and peritoneal cavity, and no papillary configuration which is characteristic of mesothelioma of other sites.

Jackson, (1958) suggested that in both men and women the tumour originates only from those mesenchymal cells which are derived from para-mesonephric primordia, via the epithelial lining of the duct. He considered the tumour as

"benign mullerian mesenchymoma that perhaps uniquely possesses within itself the capacity to produce epithelium by tetroplesia." Other authors agreed with (Burke *et al*, 1954) mullerian origin without citing any specific evidence, (Willis, R. A., 1958).

Adenomatoid tumour of broad ligment is a rare entity (Teel, 1954) and the case reported in this paper was from the broad ligment as seen on laparotomy. The large size of the tumour without leiomyoma of uterus and palpable before operation also favours its site.

The characteristics appearance of the present tumour with cells having intracytoplasmic vacuolation and brush border suggest a mesothelial origin. In a few sections there was lymphocytic infiltration which cannot be explained if mesothelial origin is postulated. Equally baffling is the situation of the tumour in the broad ligment which would favour its origin from mesonephric element.

Summary

A case report of Adenomatoid tumour of broad ligment an unusual site for its occurrence, is presented with probable histogenesis.

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See Figs. on Art Paper VII