

STRUMA OVARIII

(Two Case Reports)

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Struma Ovarii is a variant of an ovarian teratoma in which the thyroid tissue overgrows all other elements, producing tumours made up entirely or in large part of thyroid tissue. This tumour was first reported by Boetlin (1889) who discovered "thyroid acini in a typical ovarian dermoid". Struma ovarii is known for its rarity, so much so that Oumachigui *et al.*, (1975) encountered only 1 case of struma ovarii from 1967 to 1973. Two case reports of struma ovarii are being presented.

Case 1

Mrs. D. S., 30 year old hindu female was admitted with complaints of failure to conceive and a painless lump in the abdomen progressively increasing in size for 5 months. She had one stillborn confinement 8 years back Her subsequent menstrual history was normal.

General examination and systemic examination of the cardiovascular system and the respiratory system did not reveal anything significant. On abdominal examination a mass was palpable in the lower abdomen about 8" x 11" in size, irregular in shape, cystic in consistency and having considerable mobility. On bimanual examination the uterus was anteverted, ante-

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Accepted for publication on 14-9-78.

flexed and normal in size. An irregular cystic mass was palpated through the posterior fornix, separate from the uterus, 8" x 11" in size. Routine laboratory investigations did not reveal any abnormality. No radio opaque shadow could be visualised on plain X-Ray of the abdomen.

On laparotomy, a cyst was found arising from the left ovary. It measured 8" x 11" in size, the surface was smooth and glistening white. The other ovary was also enlarged to the size of a cricket ball, had a smooth surface and a cystic consistency. No adhesions were present. The uterus was normal in size. A left sided ovariectomy and a right sided ovarian cystectomy was done and the right ovary was reconstructed. The post operative period was uneventful and she was discharged from the hospital in a satisfactory condition on the 10th post operative day.

On cutting open the tumour, it was multilocular containing thin watery fluid and gelatinous greyish white material in the various compartments. Five sections were taken from the various representative areas for microscopic study. Thyroid tissue constituted the predominant element in all the sections. It was seen in the form of acini having flattened epithelium with or without reddish pink colloidal material. There was no papillary infolding of acinar epithelium or lymphatic infiltration in the stroma of thyroid tissue. There were no other derivatives of the ectoderm or other layers. The diagnosis of struma ovarii was labelled. (Fig. 1)

Case 2

Mrs. R. D., 45 year old hindu female was admitted with complaints of irregular bleeding per vaginum for 6 months and a lump in the

abdomen which was progressively increasing in size for 3 months. She had 8 full term deliveries and her last child birth was 12 years back. Her menstrual cycle was irregular, 10 to 12/25 to 30 days for 6 months.

At the time of admission she was mildly anaemic. Her blood pressure was 130/90 mm. of Hg. and pulse was 80/min. Systemic examination did not reveal any abnormality. Abdominal palpation revealed the presence of an intra-abdominal lump 5" x 4" in size, mobile and cystic in consistency with well defined margins and situated in the suprapubic region. Presence of free fluid in the abdomen could not be elicited on clinical examination. On bimanual examination the uterus was multiparous in size, pushed to the left side. Through the right fornix a mass was felt about 5" x 4" in size and cystic in consistency. The left fornix was clear. Routine laboratory investigations did not reveal any abnormality except for a moderate degree of anaemia. X-ray chest was within normal limits and plain X-ray abdomen did not reveal anything abnormal.

On laparotomy a right sided ovarian cyst was found. This measured 5" x 4". The outer surface was greyish white in colour and smooth. A panhysterectomy was done. On cutting through the cyst, the cyst was multilocular. The loculi varied in diameter from 0.8 to 1.2 cm. The lining surface was greyish white and smooth and the loculi were filled with a thick creamy fluid. Microscopic examination showed a large number of acini of varying sizes lined by a single layer of flattened cuboidal epithelium with fairly sharp borders. Lumina of these acini were filled with pink staining colloid. From the histopathological report it was concluded that the tumour was Struma Ovarii (Fig. 2). The postoperative period was uneventful and the patient was discharged in a satisfactory condition on the 11th post operative day. During convalescence the following investigations were done: Serum cholesterol 156 mg.%, B.M.R. + 28, serum creatinine 1.3 mg.%.

Discussion

Struma ovarii is composed of true thyroid tissue which is chemically, pharmacologically, biologically and microscopically identical to cervical thyroid tissue.

Brocq *et al*, (1959) reported 233 cases of struma ovarii upto 1959 while to date only 11 cases appear in the Indian literature (Kothari and Bhende (1950); Wahal *et al*, (1953); Phillips and Kaur (1965); Tyagi *et al*, (1967); Pande and Rajwanshi (1973); Oumachigui *et al*, (1975) and Talib *et al*, (1975)). In earlier studies Emge (1940) reported thyrotoxicosis in 5 to 6 per cent of the 150 cases reported. Woodruff and Markley (1957) also reported reversion of the symptoms of hyperthyroidism after removal of the neoplasm.

Struma ovarii has been reported in women between 6 years to 74 years with 84 per cent of the cases presenting in the reproductive age group. The average age reported by Smith (1946) was 42 years. Cases reported by Talib *et al*, (1975) and Oumachigui *et al*, (1975) were aged 75 years and 45 years respectively while in the present presentation the cases presented at 30 and 45 years respectively.

Docherty (1945), Rotton and Tovell (1956), Woodruff and Markley (1957), Emge (1940) have reported differently the association of struma ovarii to malignant transformation. Nicholson (1937) however, asserts that a malignant change hardly ever supervenes. However, in these 2 cases there was no evidence of thyrotoxicosis in either case, no metastasis was observed and there were no signs of malignant change, clinically or histologically. In the first case struma ovarii was present on both the sides.

Mostly ovarian involvement is unilateral (Nicholson 1950). Wahal (1953) reported bilateral struma ovarii. Bilateral tumour in association with an established dermoid on one side was reported by Kafka (1921), Morgen (1924). Smith reported 26 out of 152 is 17.1 per

cent pure thyroid tissue tumours and 76 (50 per cent) tumours in association with dermoid, serous cystadenoma or pseudomucinous cystadenoma in a study of 152 cases. Sailers (1943), Marcus and Marcus (1961) reported an incidence of 50 per cent association with dermoids, supporting the theory of teratogenous origin.

There is no distinct relationship between parity and the occurrence of struma ovarii (Phillips and Kaur 1965). Pandey and Rajwanshi (1973) reported a case of struma ovarii associated with primary sterility for 6 years. Talib *et al*, (1975) and Oumachigui *et al*, (1975) have reported 1 case each in multiparous women. In our study the first case presented with secondary sterility while the second case was a multigravida.

Summary

1. Two cases of struma ovarii in married women aged 30 years and 45 years are being reported. The first case presented with secondary sterility while the second case was a multipara.

2. The tumours consisted predominantly of thyroid tissue and were benign.

3. There was no evidence of thyrotoxicosis in either case.

4. These cases have been discussed with reference to cases of Struma Ovarii reported in literature.

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See Figs. on Art Paper IV