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Bilateral Non-Functional Benign Struma Ovarii- A Case Report

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Abstract: Struma ovarii or monodermal teratoma is a highly specialized ovarian neoplasm composed of thyroid tissue in more than 50% of the tumor. Struma ovarii accounts for 1% of all solid ovarian tumors and 1-4% of benign ovarian teratomas. The contralateral ovary may contain another teratoma, but the struma is rarely bilateral. Bilaterality is reported to be present in 6% of all cases. Here we report a case of 45 year perimenopausal female who presented with abdominal pain and progressive abdominal distension. The USG abdomen revealed ascites with large heterogenous cystic mass arising from left adnexa. Her serum CA-125 level was found to be 1130 IU/ml. These findings were suspicious for an ovarian malignancy. After surgery the diagnosis of non-functional, bilateral benign struma ovarii was made. The combination of Struma ovarii and elevated CA-125 has been reported infrequently. This is a rare case of bilateral benign struma ovarii with ascites and elevated CA-125 level.
Keywords: Struma ovarii, Monodermal teratoma, CA-125.

INTRODUCTION

Struma ovarii or monodermal teratoma is a highly specialized ovarian neoplasm composed of thyroid tissue in more than 50% of the tumor. It account for less than 5% of mature teratomas. Bilateral struma ovarii is very rare and has not been reported frequently. Struma ovarii usually presents as pelvic mass or rarely presents as pseudo Meigs' syndrome. It may be mistaken as malignant neoplasm when it is associated with elevated CA-125 levels. We report a rare case of bilateral benign struma ovary with ascites and elevated CA-125 level.

CASE REPORT

A 45 year perimenopausal female presented with abdominal pain and progressive abdominal distension of 3 months duration. There was no history of significant weight loss or bleeding per vaginum. General physical examination was within normal limit while systemic examination revealed abdominal distention with ascites. Investigations revealed normal hemogram and serum biochemistry. A USG abdomen revealed ascites with large pelvic cystic mass arising from left ovary, sized 12 cm in greatest dimension with heterogeneous echogenicity and septa. The right ovary was normal and measuring 3 cm in greatest dimension. The uterus revealed small submucosal fibroid. A diagnosis of malignant ovarian neoplasm with ascities was suggested on USG.The cytological examination of ascitic fluid revealed no malignant cells. The patient's serum CA-125 level was 1130 IU/ml (normal level < 35 IU/ml) and TSH, free T3, free T4 were within normal range. Later patient underwent planned exploratory laparotomy during which a total histerectomy with bilateral salphingoopherectomy was done.

PATHOLOGY

Gross

Gross examination of the left ovarian mass revealed a 12x6x4.5 cm mass with multi nodular external surface. Cut surface was multicystic with cyst varying from 0.5-5 cm in diameter filled with brownish jelly like gelatinous material. The intervening septae were measuring 0.5-1 cm in thickness. No papillary excrescences were seen on the luminal aspect of lining of any cyst. Few focal solid areas were also noted, which were brownish black in colour. The right ovary was partially cystic and measured 3x2x1 cm. Cut surface revealed minute cyst filled with brown jelly like gelatinous material. A submucosal fibroid measuring 2x2x1.5 cm was also identified.

Microscopy

Microscopic examination of left ovarian mass revealed normal ovarian architecture only in few foci with replacement of rest of ovarian parenchyma by benign colloid filled thyroid follicles. No cytological features of malignancy were noted. Sections from right ovary showed compressed normal ovarian architecture with replacement of rest of ovarian parenchyma by

benign colloid filled thyroid follicles. No neural tissues, skin with adnexae, cartilage or bone were noted from both ovaries. Uterus and cervix were normal histologically except a leiomyoma in myometrium. A diagnosis of bilateral benign struma ovarii was made.

Fig.1: Grossly left ovary showing variable sized multiloculated cyst filled with jelly like gelatinous material; right ovary with minute cyst and myometrium showing a small submucosal fibroid

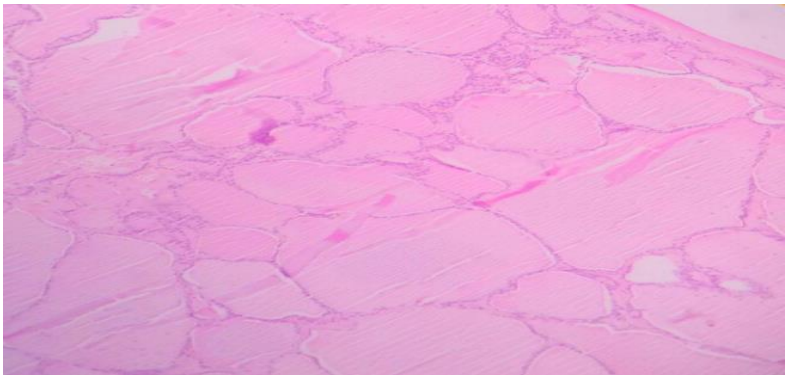

Fig. 2: Photomicrograph of left ovary showing multiple variable sized colloid filled thyroid follicles revealing benign features (H & E; 40X)

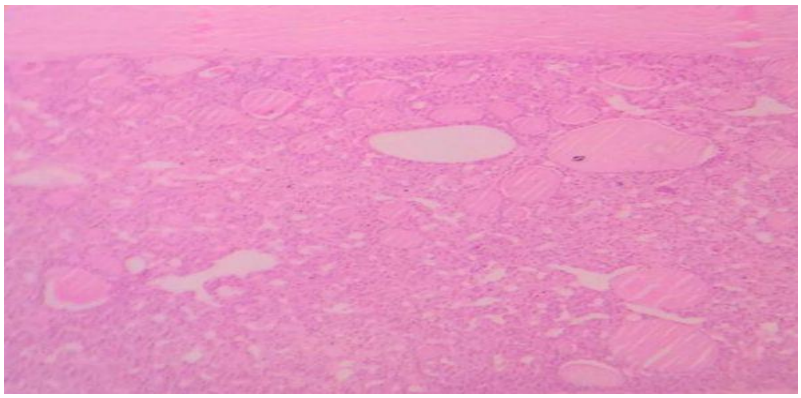

Fig. 3: Photomicrograph of right ovary showing multiple variable sized benign colloid filled thyroid follicles with compressed ovarian stroma in the periphery (H & E; 10X)

DISCUSSION

Struma ovarii was first described in 1899 by Boettlin [1]. Thyroid tissue is observed in 5-15% of all ovarian teratomas but to qualify as struma ovarii, the proportion of thyroid must comprise more than 50% of overall tissue[2].The incidence of struma ovarii varies in different studies. It forms 1% of all solid ovarian tumors and 1-4% of benign ovarian teratomas[3]. The contralateral ovary may contain another teratoma, but the struma is rarely bilateral. Bilaterality is reported to be present in 6% of all cases [4].

Struma ovarii usually presents after age of 40 years and the peak age of incidence is in fifth decade [5]. Clinical symptoms due to the presence of a struma ovarii are very diverse, such as lower abdominal pain,

palpable lower abdominal mass, bleeding per vaginum, breathlessness due to pleural effusion, abdominal distension due to ascites or weight loss due to hyperthyroidism [6, 7]. But upto 47.1% of patients with struma ovarii are without symptoms or are accompanied by non-specific symptoms that are similar to any other ovarian neoplasm. Ascites may be present in up-to one third of the cases of struma ovarii [8]. Pleural effusion and ascites is known to be associated with an ovarian fibroma/thicoma, a condition originally described by Meigs. When the same clinical features exist with other gynecologic tumors, it is referred as pseudo Meig's syndrome. Struma ovarii rarely presents as pseudo Meig's syndrome in about 5% of cases [9].

An ovarian mass and elevated serum CA-125 level in a perimenopausal female generally suggest malignancy. CA-125 is the most important clinical marker for diagnosis, treatment and follows up of epithelial ovarian neoplasms. Infrequently, benign struma ovarii is associated with elevated CA-125 levels [9]. The final diagnosis of struma ovarii is based on microscopic examination of resected ovarian mass which also confirms or excludes malignancy at the same time. About 5% of the struma ovarii are malignant and may present as thyroid carcinoma [10]. Malignancy should always be suspected, especially when ovarian tumor is associated with ascites, elevated CA-125 or sometimes a "pseudo-Meigs" syndrome [11].

This is an uncommon case of bilateral non-functional benign struma ovarii with ascites and elevated CA-125 levels. This case highlights that a pelvic neoplasm in a female presenting with ascites and elevated CA-125 levels might be benign and extensive grossing of specimen is required to rule out any other component before labeling it as monodermal teratoma.

REFERENCES

1. Boettlin R; Struma ovarii. Virchow's arch Pathol Anat., 1989;115:493-95.
2. Zaloudek C; Tumors of ovary In Fletcher Christopher DM editor Diagnostic histopathology of tumors. 2nd ed. Chrchill Livingstone 2000; 64.
3. Ayhan A, Yanik F, Tuncer R, Tuncer ZS, Ruacan S; Struma ovarii. Int J Gynaecol Obstet., 1993;42:143-46.
4. Scully RE;Recent progressin ovarian cancer. Hum Pathol.,1970; 1:73-98.
5. Rana V, Srinivas V, Bandyopadhyay S, Ghosh SK, Singh Y; Bilateral benign non-functional struma ovarii with Pseudo-Meig's syndrome. Indian J Pathol Micribiol., 2009;52:94-96.
6. O'Connell GJ, Ryan E, Murphy KJ, Prefontaine M; Predictive value of carbohydrate antigen-125 for ovarian carcinoma in patients presenting with pelvic masses. Obstet Gynaecol.,1987;70:930-32.
7. Bast RC, Feeney M, LazarusH, Nadler LM, Colvin RB, Knapp RC; Reactivity of a monoclonal antibody with a human ovarian carcinoma. J Clin Invest., 1981;68:1331-37.
8. Amrr SS, Hassan AA; Struma ovarii with pseudo-Meig's syndrome: Report of a case and review of the literature. Eur J ObstetGynaecol Report Biol., 1994;55:205-08.
9. Loizzi V, Cormio G, Resta L, Fattizzi N, vicino M, Selvaggi L; Pseudo Meig's syndrome and elevated CA125 associated with struma ovarii. GynaecolOncol., 2005;97:282-84.
10. Devaney K, Snyder R, Norris HJ, Tavassoli FA; Proliferative and histologically malignant struma ovarii: a clinicopathologic study of 54 cases. Int J Gynaecol Pathol., 1993;12:333-43.
11. Gould SF, Lopez RL, Speers WC; Malignant struma ovarii: A case report and literature review. J Reprod Med., 1983;28:415-9.