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Struma Ovarii In Pregnancy: A Case Report

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Abstract

Background: *Struma ovarii is a specialized monodermal teratoma, constituting 1-4% of benign ovarian teratoma. Composed predominantly of mature thyroid tissue of more than 50%.Based on histological features it can be classified into benign and malignant.The overall incidence of dermoid cyst is 20-25%.* ***Case:*** *A 28 year old multipara (G3P2L2) reported to VIMS labour room complex in active phase of labour at term gestation with hand prolapse with previous history of full term normal deliveries.* ***Conclusion:*** *Struma ovarii is a rare tumor of ovary. Diagnosis is made by histopathological findings.The optimal treatment for benign tumor is surgical resection i.e. either simple cystectomy or unilateral oophorectomy.Malignant cases need adjuvant treatment. Recurrence is uncommon.*

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Introduction

Struma ovarii is rare tumor of ovary classified under teratoma.Defined by the presence of thyroid tissue constituting >50% of the tumour.Thyroid tissue are commonly observed in 5-15% of dermoid tumors.[1]

Struma ovarii is a bening condition comprising 1-4% of bening ovarian teratoma,but occationally malignant transformation is observed in about 5% of cases.Due to rarity of this type of tumor there has been paucity of data in the past literature with respect to diagnosis and treatment of this tumor.[1]

We present a rare case of struma ovarii which was accidently discovered intraoperatively while performing emergency LSCS,which was confirmed later by histopathology,with absolutely no clinical features suggestive of hyperthyroidism.

Case Report

A 28 year old multipara with obstetric score of G3P2L2 with term gestation with previous h/o 2 full term normal deliveries reported to VIMS labour room complex on 13/02/2014 at11.55 am,in active phase of labour with hand prolapse since half an hour.

Patient gave history of irregular ANC's and has not undergone any USG in the present pregnancy. First and second trimesters were uneventfull.

At admission ,patient was moderately built and nourished,with vitals pulse - 88bpm,BP-120/70 mm hg,RR-16cpm,Hair to toe examination –normal,per abdomen – uterus acting 2-3/10'/60'',transeverse lie ,FHS-110bpm,pervaginal examination – cervical os 8cm dilated, right shoulder presentation with hand prolapse.

Patient was taken up for emergency LSCS at 12.10 pm on 13/02/2013.

Intraoperatively

A live female baby was extracted at 12.25pm on 13/02/2014,which cried after resusuitation.

A mass of 6*7cm, variable consistency i.e. solid to cystic was noted arising from left ovary.

Right ovary was normal,both tubes normal.

Unilateral left oophorectomy ,with bilateral abdominal tubectomy was done as

the patient and relatives were willing for concurrent sterilisation.

Hemostasis maintained

Tumor was sent for HPE(histopathological examination).

Postoperatively

Patient stable ,sutured removed on 7th day ,wound healthy.

HPE report showed

Gross: Specimen consists of grayish brown globular mass measuring 6.5*5*4cm,cut section shows multiloculated cyst largest measuring 5*4cm with thickened wall and filled with straw coloured fluid.

Micro: The multiple section studied from ovarian cyst shows normal ovarian struma and thyroid follicles.The follicles are dilated,lined by low cuboidal epithelium filled with colloid, at focal area there is diffuse follicular hyperplasia.

Features suggestive of *STRUMA OVARII*.

Patient was advised thyroid profile which was with in normal limit.

T3-1.07ng / ml

T4-6.05µg / dl

TSH-2.95µIU / ml

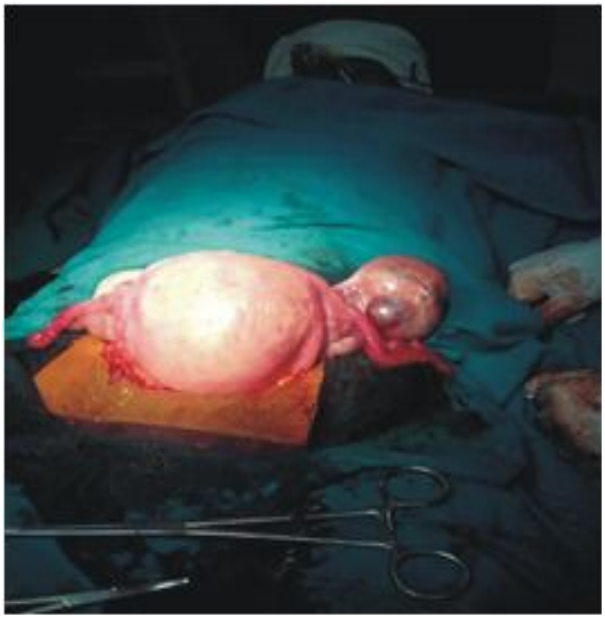

Fig. 1: Intraop findings showing solid to cystic mass arising from left ovary.

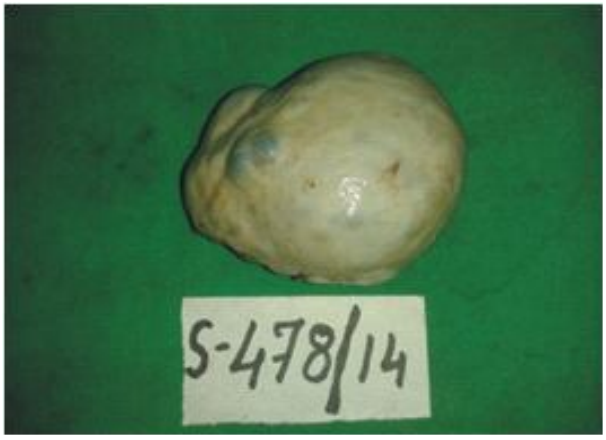

Fig. 2: Gross appearance of cyst, measuring 6.5*5*4cm

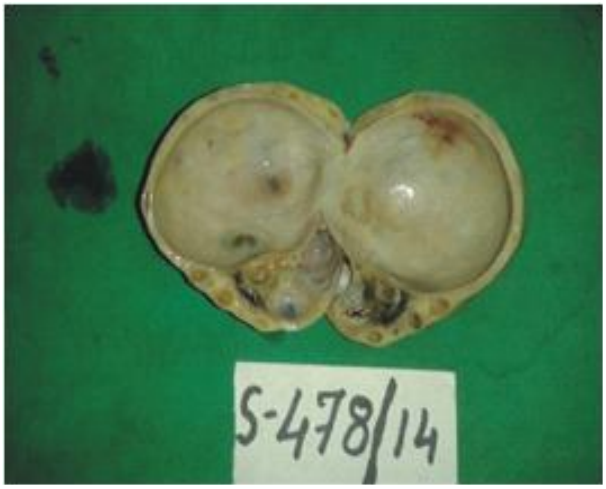

Fig. 3: Cut section shows multiloculation largest measuring 5*4cm.

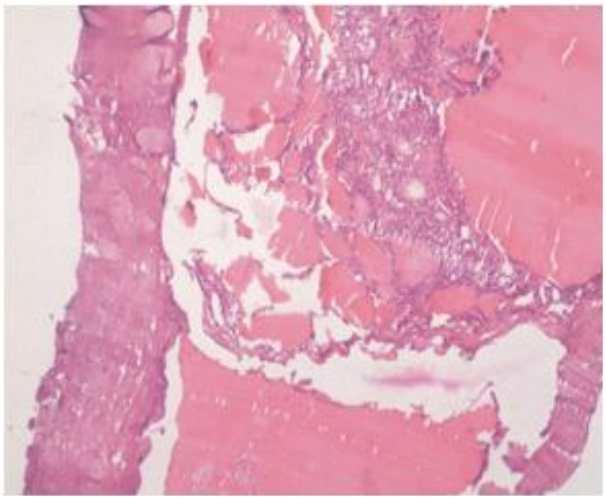

Fig. 4: HPE Showing ovarian epithelium along with thyroid tissue

Discussion

Struma ovarii comprise approximately 1% of all ovarian tumors and 1% to 4% of all ovarian teratomas. They are composed of mature thyroid tissue -which mostly (approximately 95%) has a benign nature- occupying more than 50% of the mass [1].

Struma ovarii usually presents after age of 40 years and the peak age of incidence is in the fifth decade. [2] This tumor is present in only 17.6% of cases in patients under 30 years. [3].In our present case patient was 28 yrs old.

A struma ovarii is an unusual type of mature teratoma consisting of thyroid epithelium. It shows mostly benign histopathological features of thyroid tissue [1]. Hyperthyroidism develops in approximately 5% to 15% of patients, mostly due to an adenoma, and rarely due to follicular carcinoma [4]. However autoimmune thyroiditis with a struma ovarii has been described in a few case reports. A struma ovarii generally presents with non-specific symptoms that are similar to those of other ovarian neoplasms. Diagnosis is difficult unless the tumor is very large or causes remarkable thyrotoxicosis.

Thyroid tissue in the teratoma can exhibit all histological and pathological patterns of normal thyroid epithelium, such as an adenoma or as papillary or follicular carcinoma. It may also organize in solid, embryonal or pseudotubular patterns [5].

Thyroid function tests have to be conducted in the presence of symptoms and signs related to thyroid dysfunction. [6] The incidence of thyroid hyperfunction has been reported to be 5–8% of patients with struma ovarii. [7]In the present case patient was asymptomatic and her thyroid function test was with in normal limits.

Clinical symptoms due to the presence of a struma ovarii are very diversed, such as lower abdominal pain, palpable lower abdominal mass, abnormal vaginal bleeding, ascites, hydrothorax, elevated thyroid function and rarely thyroid tumors. [8] [9] 47.1% of patients with struma ovarii are without symptoms, or are accompanied by non-specific symptoms that are similar to other ovarian tumors. [3].

Ultrasonography permits the diagnosis of the ovarian masses, but orients to the diagnosis of struma ovarii in about 11.8% of cases only. [3] In struma ovarii MRI typically shows a multilocular cystic mass with variable signal intensity within loculi. Some loculi show low intensity on T1 weighted images and very low intensity on T2 weighted images, corresponding pathologically to gelatinous colloid material. [10].As the patient had irregular antenatal checkups patient had no single scan report with her.

The final diagnosis of struma ovarii is based on pathological examination of the resected cyst / ovary, which permits at the same time, to confirm or exclude malignancy. Extensive grossing is required to rule out any other component before labeling it as monodermal teratoma. Struma ovarii typically consists of normal-appearing thyroidal tissue composed of thyroid follicles of various sizes and often is associated with mature cystic teratoma. Histologically, struma ovarii can also resemble thyroid adenoma of follicular, fetal, or embryonal type or thyroid carcinoma. [11] About 5% of struma ovarii are malignant. [12] Clinical features are quite similar, and malignancy should always be suspected, especially when the ovarian tumor is associated to ascites, elevated CA-125 levels, or sometimes a "pseudo-Meigs" syndrome. [4] Infrequently, benign struma ovarii is associated with elevated CA-125 levels. [13].In the present case diagnosis was made based on histopathological examination only.

Therapy for benign struma ovarii is surgical resection. The optimal way of management is, however, very controversial. [14] [15] The very suspicious clinical features and peroperative findings of the tumor add to this controversy. For women desiring further pregnancies, conservative management which consists of a simple cystectomy or a unilateral oophorectomy, seems to be the optimal treatment. [14] [15] Although infrequent, there have been reports of cases where women have had successful pregnancies after such conservative procedures in malignant struma ovarii.In our case as the patient and attenders were willing for tubectomy, oophorectomy with concurrent sterlisation was done.

To Conclude

The appropriate follow-up of patients with a struma ovarii in terms of residue, recurrence or metastasis after surgical resection is a current topic of debate.

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