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Case Report

Struma Ovarii: A Rare Case Report

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Abstract

Struma ovarii is an extremely rare teratoma of ovary representing 0.5-1% of all ovarian tumour and 2-5% all dermoid tumors of ovary. It occur mostly in adults usually between 30 and 50 years of age before menopause. It is most common type of monodermal teratoma and classified as teratoma only if composed predominantly of 50% of thyroid tissue.. We present a case of 52year postmenopausal woman who presented with pain in abdomen associated with abdominal distension. Imaging showed large solid cystic mass lesion in left adenexa and fallopian tube and raised carcinoma antigen (CA)-125 which was suspicious for Carcinoma Ovary. She underwent surgery, Post operative report confirmed the diagnosis of struma ovarii/strumal carcinoid of left ovary. We representing this case because of presence of thyroid tissue comprising more than 50% of overall mass.

Keywords: Ovarian Tumour; Struma Ovarii; Ascites

Introduction

Struma ovarii is an extremely rare teratoma of ovary, composed entirely or predominantely with thyroid tissue. They are usually benign, with only 5-10% of them being malignant [1]. It's incidence is about <2% of mature teratoma [2]. Mostly struma ovarii are largely asymptomatic and in advance stage presents with non-specific symptoms like pain in abdomen, palpable adnexal mass, abnormal vaginal bleeding with ascites and less likely represent with hyperthyroidism. On Ultrasonography its morphology is similar to neoplastic lesion. Therefore, the confirmed diagnosis is revealed only after surgery on the basis of histopathological finding. The most common histological type of thyroid tissue is papillary thyroid carcinoma which accounts for about 70% and may lead to metastatic disease in about 5-6%. When metastasis occur it may represent as peritoneal carcinomatosis. It also like other Ca Ovary has lymphatic or hematogenous spread, extending to pelvic/para-aortic lymph node or bone/liver/brain.

Case History

We present a case of 52year postmenopausal woman who presented to us with abdominal distension associated with abdominal pain since 15-20days. Multidector computed tomography (MDCT) whole abdomen revealed large lobulated solid cystic soft tissue mass lesion in left adenexa and measure about 7.1x6.5x6.2 cm. The left ovary was not separately identified. Small enhancing lymphnode seen in bilateral common iliac and right internal iliac and aortocaval. She underwent diagnostic and therapeutic ascitic tapping which was suspicious of neoplastic lesion. CA 125 was 728.4U/ml (reference value <35 IU/ml). She

received 4 cycle Neoadjuvant chemotherapy (NACT) with Paclitaxel and Carboplatin which showed stable disease. Repeat MDCT Abdomen and pelvis post 4 cycle NACT showed of large lobulated solid cystic mass lesion in left adenexa measured about 5.9x7.4x6.6 cm. Left ovary not seen separately from the lesion. Mild to moderate ascites noted in lower abdomen (Figure 1). She then Underwent Total abdominal hysterectomy, bilateral salphingo-oophorectomy, bilateral pelvic lymphnode dissection, omentectomy. Post operative histopathological report: section from left ovarian mass showed well circumscribed tumour, tumour composed of round to cuboidal cells with mild anisonucleosis, fine chromatin and abundant eosinophilic cytoplasm, forming variable size follicle, acini. Stroma is loose and edematous. At places cytically dilated follicles seen filled with colloid like material. Mitotic activity not seen. Features consistent with struma ovarii/strumal carcinoid of left ovary (Figure 2). Thyroid profile was done after surgery was suggestive normal euthyroid state.

Figure 1: MDCT Abdomen and Pelvis showing lobulated solid cystic mass lesion in left adnexa and left ovary is not seen separately from this lesion.

Figure 2a and b: Tumour composed of round to cuboidal cells with mild antinucleonic, fine chromatin and abundant eosinophilic cytoplasm, forming follicles and acini. Dilated follicles filled with colloid like material.

Discussion

Struma ovarii is an unusual rare ovarian tumour. It accounts for about 0.5-1% of all ovarian tumour and about 2-5% of ovarian teratomas. This is first described by Von Klden in 1895 and followed by Gottschalk in 1899 [3]. It can occur at any age group but most commonly seen in women in fifth to sixth decade of age. Struma ovarii presents with non specific symptoms such as abdominal pain, abnormal menstrual cycle, vaginal bleeding, ascites, hydrothorax which was present in our patient. The development of ascites in these patients is unclear. The occurrence of ascites ranges from 17-33.3%. There is spontaneous reversal of ascites after surgical removal.

CA 125 which is non-specific tumour marker of ovarian cancer, is found to be elevated in 80% of epithelial ovarian carcinoma. Other condition with elevated CA 125 include lesion of breast, endometrium, lung and non-malignant lesions. It is postulated that the elevated level of CA 125 is not related to the presence of malignant lesion but a secondary effect of ascites [4,5]. Here in this patient CA 125 was also elevated i.e. 728.4U/ml. In patients with struma ovarii, level of Serum CA 125 is of little importance.

The treatment for benign struma ovarii is surgical resection. Surgical management includes salpingo-oophorectomy with or without hysterectomy. Unilateral salpingo-oophorectomy is a feasible option in patients desiring for child in future only in absence of capsular invasion or distant metastasis. But for advanced

stage disease surgical management is same as that for epithelial ovarian tumours i.e. cytoreductive surgery including bilateral salpingo-oophprectomy + total abdominal hysterectomy. In case of residual disease or metastatic/recurrent disease an adjuvant treatment modality should be added. Radio-iodine therapy can also added as adjuvant treatment modality. In patients with multiple metastatic lesion or those who absorb radio-iodine poorly, external beam radiotherapy can be added [4,6]. The diagnosis of malignant form is similar to the criteria used for thyroid carcinoma. On histopathological basis it is of three types: papillary, follicular and the other variants of carcinoma [7,8]. There is no standardized category for the management of malignant struma ovarii. It should be considered and managed as thyroid cancer (0varian surgery, thyroidectomy and 131I radio-ablation) [9].

Conclusion

Struma ovarii is difficult to diagnose on the basis of clinical manifestation or imaging studies as presenting features are widely diverse. Surgical resection of dermoid tumour is sufficient for benign lesions. In case of presence of secondary condition such as ascites, hydrothorax, thyroid hyperfunction, they regress spontaneously after surgical resection of primary tumour. We representing this case because of presence of thyroid tissue comprising more than 50% of overall mass.

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