

A Rare Case: Brenner and Dermoid Tumor in Struma Ovarii

Pervin Karlı¹, Fatma Zeynep Özen², Osman Fadıl Kara¹

¹ Amasya University Faculty of Medicine, Department of Obstetrics and Gynecology, Amasya University Research Hospital, Turkey.

² Amasya University Faculty of Medicine Pathology Department, Amasya University Research Hospital, Turkey

Corresponding Author: Pervin Karlı, MD, Ph, Associate prof, Department of Obstetrics and Gynecology, Amasya University Research Hospital, 05 000 Amasya, Turkey.

Abstract: Teratoma is a type of benign ovarian tumor. Struma ovarii is a monodermal teratoma. Our case applied with a complaint of swelling in his stomach. Postoperatively, struma ovarii were diagnosed pathologically, including teratomas and brenner tumors.

Keywords: teratoma, struma ovarii, brenner tumor

1. INTRODUCTION

Teratomas are seen in two forms, mature and immature. The less common type of mature teratoma is the monodermal type struma ovarii. This condition is related to the presence of thyroid tissue at various rates. Sometimes this tissue can cause thyrotoxicosis. Brenner tumor is a rare epithelial tumor of the ovary. Pathologically, it can be rarely observed other tumor. Benign / malignant Brenner tumors and mature teratomas are among these. In our case, overcurrent mass consisting of pure thyroid tissue is accompanied by a focal 1 millimeter area, both mature teratoma and Brenner tumor. While presenting this case, we aimed to observe the general features of the struma ovary and to present the situations that may be accompanied by the literature.

2. CASE

A 47-year-old female patient was admitted due to bloating in her abdomen. Ultrasonography was appeared a mass of approximately 10x9x9 cm. Surgically unilateral salpingo-oophorectomy was performed. The pathologically proven mass was 10.5x9.0x6.0 mm in diameter with a partially irregular appearance and dark brown color. The cross-section was exist up of a large cystic cavity, and serosal mucus emptied through it. It was observed with solid area in this district. This solid area was approximately 20x10 mm in size and the cross-section was compatible with thyroid tissue containing colloidal nodules. On

microscopic evaluation, the solid area was observed extensive thyroid follicles. Some of these follicles were filled with colloid. Interestingly, a pathologically inferior area had an area of 1 millimeter in total, a tiny benign tumor with Brenner tumor and mature teratoma. A striking finding in the blood samples taken during the patient's preparation for surgery was that the free T3, T4 and TSH values were normal.

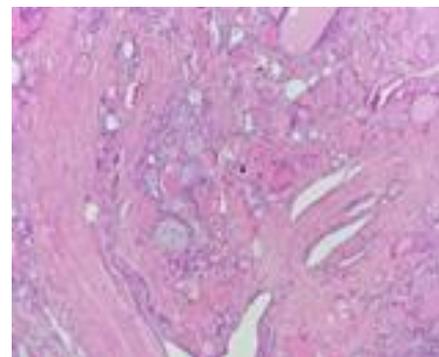


Figure 1: Benign Brenner tumor was observed in a 1-millimeter focus in the struma ovary

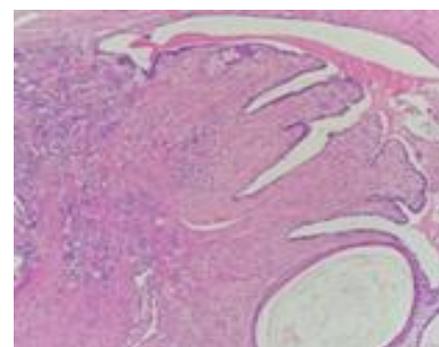


Figure 2: Neoplasm with cystic and solid areas of thyroid follicular epithelial cells were observed in over struma. The cystic dilated tubules filled with colloid are noteworthy in the tumor, which is usually organized as tubular structures. The mature teratoma is accompanied by sebaceous glands.

3. DISCUSSION

Struma ovarii is a monodermal teratoma (1). Struma ovarii is a rare ovarian tumor and exists for about 2.7% of all ovarian tumors. The struma ovary usually contains normal thyroid tissue. However, it sometimes includes thyroid adenomas, thyroid carcinoma and hyperplastic changes. Struma ovarii is usually a solid organizing neoplasm (2,6). It is interesting that in our case we have a large cystic space and that it forms a limited solid arrangement within this cystic area. Brenner tumor is a relatively rare ovarian tumor and accounts for about 5% of all ovarian tumors. Brenner tumor is classified as benign, malignant and borderline (6). In our case histomorphologic features were compatible with benign Brenner tumor and no atypical cytologic features were observed. It is striking that it is observed in a smaller focus, even in solid and millimeters. Brenner tumor is thought to develop from ovarian surface epithelium (6). Struma ovarii is a monodermal tumor and develops from the germ cell (2,6). The dermoid tumor, which is observed in a focal area, also originates from germ cells. Gathering of struma ovarii and Brenner tumors, germ cells have been shown to be the origin of the literature (2,6).

4. RESULT

As a result, the struma ovary is a rare neoplasm. This neoplasm is not often accompanied by mature teratomas and Brenner tumors. Our case is interesting both in pathological diagnoses and in the fact that the struma ovary is not solid but it is interesting because of cystic. One finding that should be kept in mind is that struma ovarii do not always produce thyroid hormone

release and there is a possibility that several types of ovarian lesions may coexist at the same time.

REFERENCES

- [1] Nogales F, Talerman A, Kubick-Huch RA, Tavassoli FA, Devouassouz-Shisheboran M. Germ cell tumor. Tavassoli FA and Devilee P eds. World Health Organization Classification of Tumours. Pathology and genetics of tumours of the breast and female genital organs. IARC press, Lyon. 2003; pp: 163-175.
- [2] Klein HZ, Strauss SH, Unger AM. Coexisting Brenner tumor and struma ovarii (mature gonadoblastoma): report of a case. *Obstet Gynecol* 1968; 31: 779-784.
- [3] Elemenoglou A, Zizi-Serbetzoglou A, Trihia H, Vasilakaki T, Boumia E. Mixed ovarian neoplasm composed of struma ovarii and Brenner tumor: report of a case. *Eur J Gynecol Oncol* 1994; 15:138-141.
- [4] Burg J, Kommos F, Bittinger F, Moll R, Kirkpatrick CJ. Mature cystic teratoma of the ovary with struma ovarii and benign Brenner tumor: a case report with immune histochemical characterization. *Int J Gynecol Pathol* 2002; 21:74-77.
- [5] Yoshida M, Okabayashi C, Tachibana M, Minami R. Coexisting Brenner tumor and struma ovarii in the right ovary: case report and review of the literature. *Pathol Int* 2004; 54: 793-797.
- [6] Takeuchi K, Ohbayashi C, Kitazawa S, Ohara N, Maruo T. Coexistence of Brenner tumor and struma ovarii: case report. *Eur J Gynecol Oncol* 2005; 26: 109-110