

MATURE TERATOMA OF THE FALLOPIAN TUBE
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Abstract

Teratomas of fallopian tube are extremely rare tumors with less than 80 cases reported in the literature. The majority of reported tumors are benign and show great variation in size.

We present a case of mature teratoma of the left fallopian tube occurring as a synchronous neoplasm in a 41-years old patient, surgically treated for invasive squamous cell cervical cancer.

Although the incidence of fallopian tube teratomas is low, awareness of its existence is necessary, since their occurrence can sometimes lead to serious complications.

Keywords: teratoma, fallopian tube, neoplasm.

Introduction

Teratomas of fallopian tube are extremely rare tumors with less than 80 cases reported in the literature [1]. Correct preoperative diagnosis has not been established in any of the reported cases [1, 2]. The first case of fallopian tube teratoma was described in 1865 [2]. These tumors are usually cystic or rarely solid and show great variation in size [2, 3]. The most common localization is in the ampullar or isthmic region of the fallopian tube, where they are attached to the tubal mucosa by a pedicle [2, 3]. The majority of reported tumors are benign [1] and have wide age range distribution (17-67 years of age) [1], most of them occurring in the fourth decade [3].

Histologically, tubal teratomas have similar morphology to their ovarian counterparts [4]. Apart from the fallopian tube, teratomas can also occur in other extragonadal sites, such as primarily in the sacrococcygeal region, mediastinum, retroperitoneum, or head and neck region [5].

Case report

A 41-year-old patient was admitted in our hospital for operative treatment of previously diagnosed invasive squamous cell carcinoma of the uterine cervix. A radical hysterectomy with bilateral salpingo-oophorectomy and regional lymph node dissection was performed.

On macroscopic examination of the operative material, the malignant neoplasm of the uterine cervix infiltrated the vaginal fornix and parametra. Additionally, a polypoid pedunculated tumor measuring 1.5 cm was noticed protruding into the lumen of the ampullary region of the left fallopian tube. The tumor had smooth white-yellow surface. On cut sections, a small 3 mm cyst was centrally located, embedded in adipose and fibrous tissue. The tumor had semi-hard consistency (Fig. 1).



Figure 1. Macroscopic appearance of the tubal teratoma.

Subsequent microscopic examination revealed that the outer tumor surface was covered with benign serous type of epithelium (Fig. 2).

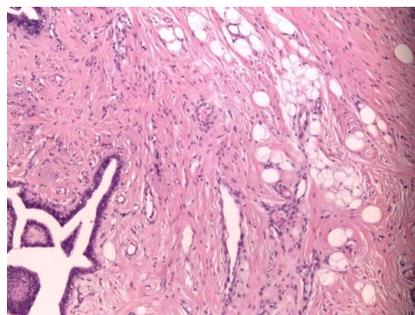


Figure 2. The tumor surface was covered with benign serous epithelium (hematoxylin and eosin, x 20).

The tumor mass composed of fascicles of fibroblasts, collagen fibers and lobules of adipocytes. The surfaces of the smaller cysts were covered with mature squamous or columnar respiratory type of epithelium (Fig. 3 and 4).

Neural, cartilaginous and smooth muscle tissues were also present (Fig. 5 and 6). In the postoperative follow-up the patient proceeded to further oncologic treatment for the cervical cancer.

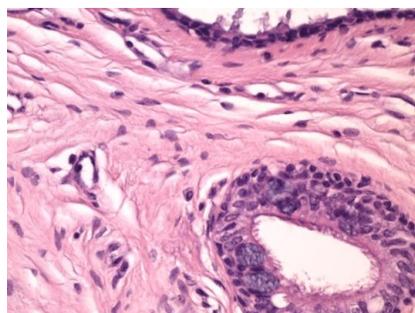


Figure 3. Inner cyst covered with columnar respiratory epithelium (hematoxylin and eosin, x 20).

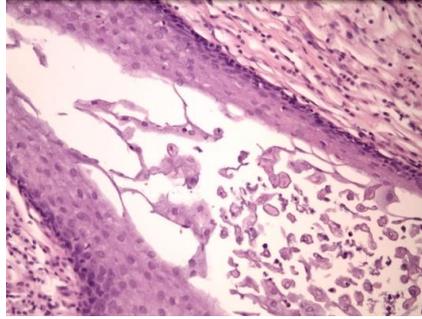


Figure 4. Another cyst covered with squamous epithelium (hematoxylin and eosin, x 20).

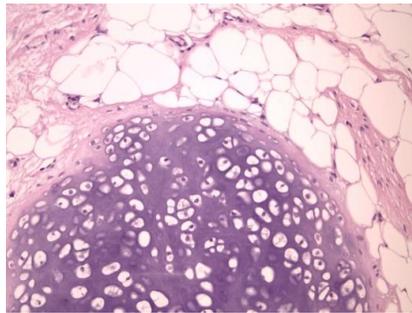


Figure 5. Cartilaginous and adipose tissue were present in the tubal teratoma (hematoxylin and eosin, x 20).

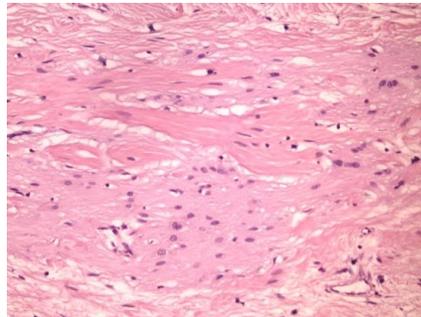


Figure 6. Neural and smooth muscle tissue in the tubal teratoma (hematoxylin and eosin, x 20).

Discussion

Teratomas are germ cell tumors and are classified as mature (cystic or solid) and immature teratomas. Teratomas usually contain a mixture of various tissues such as skin, cutaneous adnexae, cartilage, bone, salivary glands, respiratory epithelium and neural of muscle tissues [4, 6].

Mature teratomas are the most common benign ovarian neoplasms, but their occurrence in the fallopian tube is extremely rare [6]. Only a few cases of immature fallopian tube teratomas have also been reported [7].

According to the current understanding of the pathogenesis of teratomas, it is believed that they originate from the germ cells which migrate from the yolk sac to the primitive gonadal bud. Therefore, tubal teratomas may result from the failure of these germ cells to reach the

ovaries [8]. In most of the cases, teratomas are intraluminal pedunculated tumors [2]. Although usually asymptomatic, these tumors can be related to reduced parity, menstrual irregularity, leukorrhoea, postmenopausal bleeding, or abdominal pain [9].

We report a small mature predominantly solid teratoma with unusual localization in the fallopian tube. The patient was surgically treated for cervical cancer and the tubal tumor was an accidental finding. The maximal tumor diameter was 1.5 cm. Others have reported tubal teratomas as small as 0.2 cm, but the largest reported tumor measured 31 cm [4, 10]. As in our case, most of the tubal teratomas were unilateral, and bilateral tumor occurrence is rare [4]. Synchronous occurrences with ovarian teratomas have also been reported [4, 11].

Tubal teratomas can lead to ectopic pregnancy [12, 13]. Other pathologic conditions accompanying tubal teratomas have also been described, such as uterine leiomyomas or malformations, ovarian cysts and malignant neoplasms such as endometrial adenocarcinoma or cervical squamous cell carcinoma [4, 8]. In our opinion, the synchronous occurrence of a malignant neoplasm is probably accidental finding. It is reasonable to consider that tubal teratomas might cause reduced fertility or ectopic pregnancy [1, 2, 13, 14]. However, the occurrence of synchronous benign or malignant neoplasms of other genital organs is most probably accidental. Namely, the incidence of fallopian tube teratomas might be higher than estimated, since they are usually diagnosed when fallopian tubes had been removed for some other reason.

Larger cystic mature teratomas can be diagnosed during ultrasound examination but are often misdiagnosed as ovarian in origin [4].

As a conclusion, although the incidence of fallopian tube teratomas is low, awareness of its existence is necessary, since their occurrence can sometimes lead to serious complications [15]. The prognosis is favorable following complete surgical excision. Careful microscopic examination of the specimen is mandatory, due to possible, although rare, malignant transformation [8].

References

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