CLINICAL VIGNETTE

Abdominal Distention in a Reproductive Age Female

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Case

A 22-year-old female presented to primary care requesting weight loss medications due to concern about truncal obesity. She reported her large abdomen interfered with her breathing, affecting her daily activities. She noted significant weight gain over three years without change in her diet. She has chronically irregular menses since menarche at eleven. She has never been sexually active and has no family history of breast or ovarian cancer.

Physical exam revealed prominent abdominal distension with a palpable firm mass with irregular borders extending to the xiphoid. Vaginal exam was deferred for cultural reasons.

Laboratory testing was negative, including pregnancy test, CBC, and Comprehensive Metabolic Panel. CT of the abdomen and pelvis was remarkable for large bilateral ovarian masses. The right ovarian mass measured 23.8 x31.9 x 31.9 cm with a left ovarian mass of 6.7 x 6.7 cm. Exam under anesthesia revealed a 7-week size uterus adjacent to a large mass from the right ovary composed of fluid filled multiloculated cysts. The left ovary included a 7cm cyst with hair, consistent with a mature teratoma.

Discussion

Teratomas belong to the family of germ cell tumors and are derived from all 3 germ cell layers. They are classified based on histology as mature teratomas, immature teratomas or monodermal (carcinoid, neural, and truma ovarii) teratomas.[1] These tumors usually occur in women's ovaries, male testicles, and the tailbone of children. They can also be found in the chest, abdomen and in the central nervous system.

Mature cystic teratomas are the most common ovarian neoplasm. Mature cystic teratomas are called dermoid cysts with a 1-2% chance of malignant elements. Multiple studies have reported risk factors linked to mature cystic teratomas. These include late menarche with menstrual irregularities, alcohol abuse, prior history of cystic teratoma, fewer pregnancies, infertility, and exercise during adolescence, related to anovulatory menstrual cycles. The pathophysiology of these tumors remains unclear, despite many studies. These tumors may differentiate into individual tissue cells, as well as whole organ systems. In the past, some theorized witchcraft, immoral acts, and consumption of hair and bones.[2]

One of the most common complications of ovarian teratomas is ovarian torsion and surgery is the definitive treatment of teratomas. Intermediate sized teratomas are more prone to torsion rather than either large or small tumors. The major concern with surgery is preservation of fertility and minimization of post-surgical adhesions. Patients who are premenopausal, wish to preserve fertility and have cysts <6 cm, can pursue conservative management if growth is less than 2 cm per year. Premenopausal, symptomatic patients, with cysts less than 5 cm may have laparoscopic cystectomy. However, cysts greater than five to six cm involving the entire ovary, must be removed by oophorectomy.[2]

Cystic teratomas are usually asymptomatic and often incidentally found on imaging. The next most common presentation is abdominal pain. Some patients have increased abdominal girth, like our patient, with compression of adjacent structures causing gastrointestinal or urinary symptoms.[3]

Malignant transformation in dermoid cysts is rare, reported in less than 2% of cases, more often in postmenopausal women. [4] The most common malignancy associated with dermoid cyst is squamous cell carcinoma. Tumors greater than 10 cm in older patients are more likely to have undergone malignant transformation, which is usually diagnosed postoperatively. Standard

of care with these types of dermoid cysts are salpingo-oopherectomy and total hysterectomy. Treatment with chemotherapy and radiation have variable results. There is no definitive therapy for squamous cell carcinoma arising from mature teratomas.[2,4]

Laparoscopic resection remains the gold standard of care for mature ovarian teratomas.[5] Existing literature reports approximately 4% of teratomas reoccur post removal. After resection, our patient was started on combined oral contraceptives with close follow up.

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