Dermoid Ovarian Cyst in a Young Unmarried Woman: A Case Report

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Case Report
Subject: Obstetrics and Gynecology

Abstract:
Benign dermoid ovarian cysts uncommonly cause symptoms in young girls. It is estimated that they constitute 0.35% of all tumors occurring in children less than 15 years of age. These growths can develop in a woman during her reproductive years. They can cause torsion (twisting), infection, rupture and cancer of the ovary. These dermoid cysts can be removed with either conventional surgery or laparoscopy.

Key Words: Benign Germ Cell Tumors, Cystic Teratomas (Dermoid cysts), Malignant, Germ-cell Neoplasms, Immature Malignant Teratomas.

Introduction:
The majority of gynecologic pelvic tumors in the young age group involve the ovary. Even during childhood, the ovaries are typically active, and many of these masses are functional cysts. Neoplastic lesions usually are benign germ cell tumors, and mature cystic teratomas (dermoid cysts) are the most common. Malignant ovarian tumors in children and adolescents are rare and account for only 0.9 percent of all malignancies in the young age group [4].

These neoplasms’s of germ-cell origin constitute 15% to 20% of ovarian tumors [3]. They display the distressing behavior of arising in the first two decades of life, and the younger the person, the greater is the likelihood of malignancy. However, more than 90% of these germ-cell neoplasms are benign mature cystic teratomas.

Case Report:
Miss X, a 22 year old lady, attended our OPD on 11th November 2014, with chief complaints of irregular cycles with increased flow since 1 year. Bleeding is associated with small clots and dysmenorrhea, white discharge per vagina since 5 years. No h/o itching or foul smelling discharge. Her Previous menstrual cycle’s irregular- 3days/30 day. LMP was on 06.11.2014.

No Past history of epilepsy, Tuberculosis, Bronchial asthma, Jaundice, Thyroid diseases.

On examination patient was thin built and moderately nourished, pallor present, no lymphadenopathy, her weight is 35 Kg her Height is 4 feet 8 inches

Her vitals normal, systemic examination normal, on examination abdomen shape is scaphoid, all quadrants are moving equally with respiration, umbilicus in midline and inverted, no engorged veins, no visible pulsations and visible peristalsis. On Palpation no local rise of temperature, on tender, soft and no organomegaly. On Auscultation bowel sounds are heard.

On ultrasonography - Uterus was 7 X 4 X 3.5 cm Endometrial thickness - 5mm ovaries: Right ovary 3 X 3 cm. left ovary 6.5 X 5 cm with a heterogenic mass lesion noted with hyper echoic focus. Left ovary not found separately, mass is cystic with thin internal septations and cyst wall measuring 3mm, no ascitis.

Impression:
Left ovarian mass lesion probably dermoid. Routine blood investigations, Hb was 6.3 gm%, ESR- 35mm/1 hr, blood Grouping and Rh typing A positive.

Laprotomy was offered to the patient, preoperatively 3 units packed cell transfusions done and Hb corrected to 10.3 gm% consent was taken, pre operative injectable broad spectrum antibiotic was given on the day of surgery.

She was taken up for laprotomy on 18 November 2014. Laprotomy findings include uterus normal in size and shape rt tube and ovary normal, lt ovarian cyst of measuring 7 X 6 X 5 cm found it ovary not visualised separately. Left tube normal. Left salphingo opherectomy done.
Post operative recovery is uneventful and sutures removed on 7th post operative day and patient was discharged with stable hemodynamic. **Cut Section** shows sebaceous secretion and matted hair that, when removed, reveal a hair-bearing epidermal lining.

**Biopsy** - sections studied shows cyst lined stratified squamous epithelium with lumen containing keratin material, sebaceous glands, cartilage, adipose tissue with osteiod. Report of Mature teratoma given.

![Figure 1: cut section of dermoid cyst showing hair and sebaceous material.](image)

**Discussion:**

There are neoplasm's of germ-cell origin constitute 15% to 20% of ovarian tumors. They display the distressing behavior of arising in the first two decades of life, and the younger the person, the greater is the likelihood of malignancy. However, more than 90% of these germ-cell neoplasms are benign mature cystic teratomas. The immature malignant variant is rare.

**Benign (Mature) Cystic Teratomas:**

Almost all of these neoplasm's are marked by differentiation of totipotential germ cells into mature tissues representing all three germ cell layers: ectoderm, endoderm, and mesoderm. Usually there is a formation of a cyst lined by recognizable epidermis replace with adnexal appendages—hence the common designation dermoid cysts [1]. Most are discovered in young women as ovarian masses are found incidentally on abdominal radiographs or scans because they contain foci of calcification produced by contained teeth. About 90% are unilateral, more often on the right. Rarely do these cystic masses exceed 10 cm in diameter. On transaction, they are often filled with sebaceous secretion and matted hair that, when removed, reveal a hair-bearing epidermal lining. Sometimes there is a nodular projection from which teeth protrude. Occasionally, foci of bone and cartilage, nests of bronchial or gastrointestinal epithelium, and other recognizable lines of development are also present.

For unknown reasons these neoplasm's sometimes produce infertility. In about 1% of cases there is malignant transformation of one of the tissue elements, usually taking the form of a squamous cell carcinoma. Also, for unknown reasons, these tumors are prone to undergo torsion (10% to 15% of cases), producing an acute surgical emergency.

**Immature Malignant Teratomas:**

These neoplasms are found early in life, the mean age being 18 years. They differ strikingly from benign mature teratomas in so far as they are often bulky, are predominantly solid or near-solid on transaction, and are punctuated and thereby areas of necrosis. Microscopically [2], the distinguishing feature is a variety of immature or barely recognizable areas of differentiation toward cartilage, bone, muscle, nerve, and other structures. Particularly ominous are foci of neuroepithelial differentiation, because most such lesions are aggressive and metastasize widely. Immature teratomas are both graded and staged in an effort to predict their future. Those of grade I, stage I can often be cured with appropriate therapy, whereas
the opposite end of the spectrum carries a much graver outlook.

**Conclusion:**

Though it is asymptomatic in this case, early detection and surgical removal of the dermoid ovarian cyst will prevent pressure symptoms like abdominal bloating or swelling, painful bowel movements, pelvic pain before or during the menstrual cycle, painful intercourse, breast tenderness and also preserves fertility and prevents severe complications like ruptured cyst and ovarian torsion and malignancy. Both these complications can have serious consequences if not treated early.

**References:**