

Epidermoid cyst of the ovary

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Abstract

Epidermoid cysts of the ovary are rare lesions and are uniformly incidental findings in hysterectomy specimens. They must be differentiated from mature cystic teratomas of the ovary, and some authors believe them to be monodermal teratomas. The histogenesis is still uncertain. We report an epidermoid cyst of the ovary which was an incidental finding.

Introduction

Epidermoid cysts of the ovary are exceptionally rare and are lined exclusively by mature stratified squamous epithelium, and are distinguished from mature cystic teratomas of the ovary by the absence of skin adnexae and other tissues after thorough sampling.¹ The possibility that some of these lesions are actually mature cystic teratomas in which the skin adnexal components were missed or absent (mature monodermal teratomas) cannot be totally discounted.²

Several cases of epidermoid cysts of ovary have been reported in literature from around the world and almost all these cases have represented incidental findings during the study of a hysterectomy specimen.

Case Report

A 50 year old lady underwent hysterectomy and bilateral salpingoophorectomy in Hyderabad in November 2005 for treatment of uterine leiomyoma. The uterus with cervix measured 11x7.5x2.0 cms. On sectioning the myometrium, a single nodular lesion with a greyish white, whorled cut surface was identified. It measured 1.5x1.0cms in dimension. The right ovary measured 3.6x1.0x0.8cms and the right fallopian tube 4.3x0.4cms. The left ovary measured 3.3x1.0x0.4cms and the left tube measured 4.4x0.4 cms. On sectioning, the right ovary had a mostly solid pale yellow cut surface. However, a small thin walled cyst was identified measuring 0.3x0.2 cms in dimension. It was filled with thin fluid. Representative sections were taken from the cyst and from the solid areas. On sectioning, the left ovary had a solid pale yellow cut surface and representative sections were taken.

On histological examination, sections from endometrium showed benign non-secretory endometrium. Sections from the nodular lesion showed a leiomyoma without pleomorphism, increased mitotic activity or necrosis. Sections

from cervix showed mild non specific cervicitis. Sections from both fallopian tubes were unremarkable. Sections from both ovaries showed stromal hyperplasia. In sections from right ovary, a cyst was identified lined by benign stratified squamous epithelium. No skin adnexae (hair follicles sebaceous glands) were seen. However, extensive keratin was seen in the lumen, and calcification was also seen (Figures 1 and 2). The right ovary was then regrossed and submitted entirely for histologic examination. However, no skin adnexae or any other tissues were found. Therefore, the lesion in the right ovary was reported as epidermoid cyst.

Discussion

These rare lesions have been reported from around the world and almost uniformly represent incidental findings in the study of hysterectomy specimens.³ The earliest cases were reported by Nogales and Silverberg in 1976⁴, and they suggested that metaplasia of the coelomic surface epithelium of the ovary was involved in the histogenesis of these lesions. Young and Scully described 3 cases in 1980⁵ and after making a comparative study of these lesions, walthard nests and epithelial components of Brenner tumours suggested that epidermoid cysts originate from epithelial cell nests of the type encountered in Brenner tumours. Fan et al² in their series of 8 cases suggest that ovarian epidermoid cysts represent monodermal and highly differentiated teratomas and should be classified as such. They also believe that epidermoid cysts of the ovary are not as rare as the literature suggests and some are probably misdiagnosed as dermoid cysts. Recently, more case reports have been published.^{6,7} Peters et al⁸ reported an epidermoid cyst of the ovary in combination with a well differentiated endometrioid adenocarcinoma of the ovary. The carcinoma had some foci of squamous metaplasia but there was no continuity between the wall of the epidermoid cyst and the squamous metaplasia of the carcinoma. The authors suggested that their case highlighted the still unsolved question about the origin of epidermoid cysts and added to the hypothesis that these cysts arise from pluripotent coelomic epithelium. Azzena et al⁹ described a case in combination with a primary carcinoid tumor of the ovary. In our case, the epidermoid cyst in right ovary was associated with stromal hyperplasia in both ovaries.

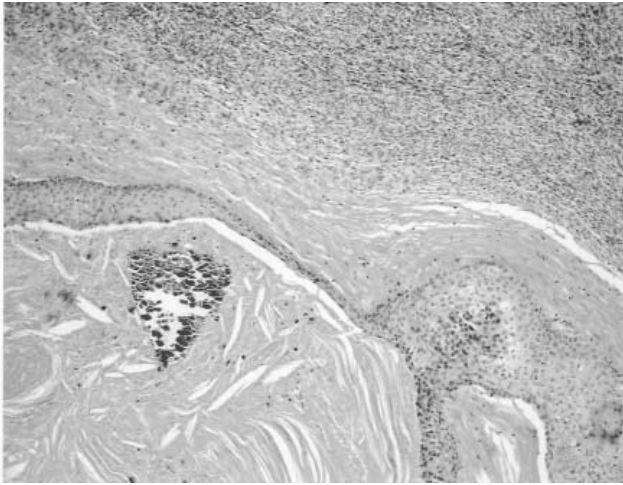


Figure 1. Cyst lined by stratified squamous epithelium and filled with keratin debris. Adjacent ovarian stroma shows hyperplasia. H&E (x4).

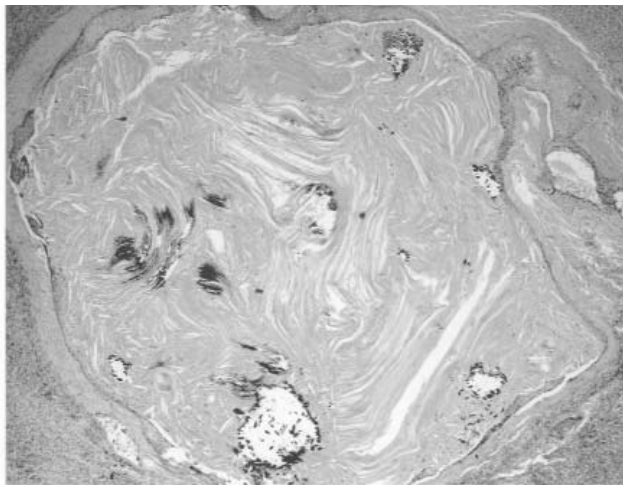


Figure 2. Cyst showing squamous lining, keratin debris in lumen, and surrounding stromal hyperplasia. H & E (X10).

References

1. Female Reproductive System, Ovary. In Rosai J Ed: Rosai and Ackerman's Surgical Pathology, Ninth Edition Elsevier Amsterdam, Netherland 2004; pp. 1689-90.
2. Fan LD, Zang HY, Zhang XS. Ovarian epidermoid cyst: report of eight cases. *Int. J Gynecol Pathol* 1996;15:69-71.
3. Pezzica E, Buzzi A, Crescini C. Epidermoid cysts of the ovary. Presentation of a case of unusual dimensions. *Minerva Ginecol* 1991;43:265-6.
4. Nogales FF Jr, Silverberg SG. Epidermoid cysts of the ovary: a report of five cases with histogenetic considerations and ultrastructural findings. *Am J Obstet Gynecol* 1976;124:523-8.
5. Young RH, Prat J, Scully RE. Epidermoid cyst of the ovary. A report of three cases with comments on histogenesis. *Am J Clin Pathol* 1980;73:272-6.
6. Ozercan IH, Cobanoglu B, Simsek M, Dogan C, Ozercan MR. Epidermoid cyst of the ovary: a case report. *Pathologica* 2000;92:284-5.
7. Sheikh SS, Amr SS. Epidermoid cyst of the ovary. *J Obstet Gynecol* 2003; 23:213.
8. Peters K, Gassel AM, Muller T, Dietl J. Ovarian epidermoid cyst and endometroid carcinoma: do they share their origin? *Zentralbl Gynakol* 2002; 124:443-5.
9. Azzena A, Zannol M, Bertezolo M, Zen T, Chiarelli S. Epidermoid cyst and primary trabecular carcinoid of the ovary: case report. *Eur J Gynaecol Oncol* 2002;23:317-9.