ESGO European Society of Gynaecological Oncology
21st European Congress on Gynaecological Oncology
Nov 2-5, 2019 | Athens, Greece

Is Endometriosis Always Benign?

Vasileiadou Dimitra, Litos Michael, Triantafyllidi Vera, Gerolymatos Andreas
Department of Obstetrics & Gynecology, Konstantopouleion General Hospital of Nea Ionia, Athens, Greece

Aim

The aim of this study is to present a case of an ovarian endometrioma with atypia.

Material & Methods

The present study is a case report and literature review.

Case Report

A 43-year-old patient underwent a scheduled laparoscopic left ovarian cystectomy. Intraoperative findings included a left ovarian endometrioma and diffuse pelvic endometriosis, with multiple adhesions and a rectovaginal septum nodule. The endometrioma was excised and adhesiolysis was performed. Histology was diagnostic of atypical ovarian endometriosis, due to the presence of epithelial micropapillary tufts and extensive nuclear atypia.

Endometriosis

Endometriosis is defined as the presence of endometrial glands and stroma in locations besides the endometrial cavity. Its prevalence is estimated to be about 10% of reproductive age women. The most common sites of involvement include the ovaries, uterosacral ligaments, ovarian fossae, pouch of Douglas and urinary bladder. Less common sites are the vagina, cervix, rectovaginal septum, cecum, ileum, inguinal canal, perineal or abdominal scars and the umbilicus.

Atypical Endometriosis

Atypical ovarian endometriosis was first described by LaGrenade and Silverberg in 1988 and is characterized by the presence of atypia or karyotypic alterations in the ectopic epithelium. It therefore demonstrates features that fall between benign and malignant. Its diagnostic criteria are as follows:

1) the nuclei of ectopic endometrial epithelia are heavily or lightly stained, with medium to severe degree of multiformity
2) the ratio of nucleus to cytoplasm is increased
3) cells congregate showing in layers or grouped protrusions
4) atypical glandular structures are seen

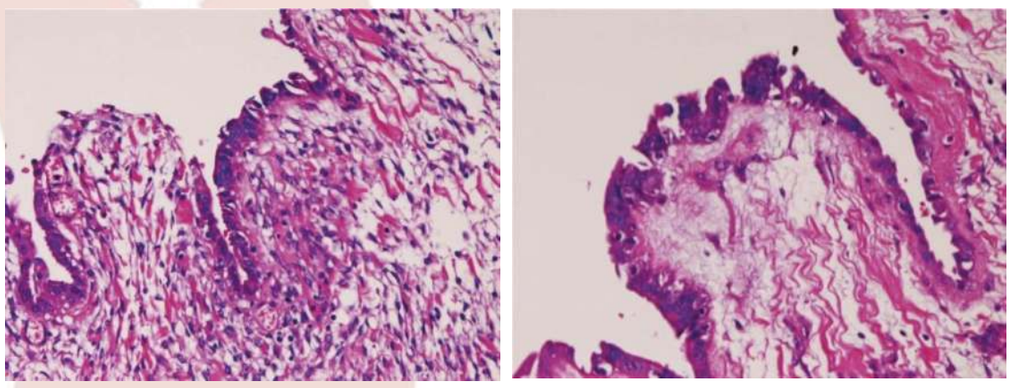
The diagnosis is confirmed when three or more criteria are met.
Malignant transformation of endometriosis was first described by Sampson in 1925 with the following criteria:

1) clear evidence of endometriosis close to the tumor
2) documentation of malignant foci arising in endometrioid lesions, rather than originating outside the lesion
3) the presence of tissue resembling endometrial stroma surrounding the characteristic glands
4) demonstration of a histologically proven transition from benign endometriosis to cancer

Atypical Endometriosis

Atypical endometriosis occurs in less than 1-3% of endometriomas and is considered to have a malignant potential towards subtypes of endometriosis – associated ovarian cancer, such as endometrioid and clear-cell carcinoma.
Not many studies have investigated the association of atypical endometriosis with ovarian neoplasia.

- Moll et al. studied the time progression in a case of a woman who was diagnosed with atypical endometriosis in an ovarian endometrioma and presented with a clear-cell carcinoma of the same ovary three years later.
- Prefumo et al. reviewed 339 ovarian endometriosis patients and found that atypia was present in all cases of endometrioid carcinoma arising in endometriosis.
- Fukunaga et al. found foci of atypical endometriosis in 61% of the 54 endometriosis – associated ovarian cancer patients versus 1.7% of 255 patients with endometriosis without cancer.
- Finally, Tanase et al. presented a patient who underwent three laparoscopic operations for endometriosis over a period of ten years and she was diagnosed with Grade I endometrioid adenocarcinoma after the third operation. Pathologic review of the second operation specimen, four years before, demonstrated atypia.



Atypical endometriosis. H&E staining, 100x.

Conclusion

Atypical endometriosis may be considered as a precancerous lesion and requires close follow – up or prophylactic treatment.

References

- Fukunaga M, Nomura K, et al. Ovarian atypical endometriosis: its close association with malignant epithelial tumours. Histopathology. 1997 Mar;30(3):249-55. PubMed PMID: 9088954.
- Jain M, Sehgal S. Malignant transformation in an atypical endometrial cyst of the ovary. Indian J Pathol Microbiol. 2017 Jan-Mar;60(1):132-133. PubMed PMID: 28195114.
- Kajiyama H, Suzuki S, et al. Endometriosis and cancer. Free Radic Biol Med. 2019 Mar;133:186-192. PubMed PMID: 30562557.
- LaGrenade A, Silverberg SG. Ovarian tumors associated with atypical endometriosis. Hum Pathol. 1988 Sep;19(9):1080-4. PubMed PMID: 3417292.
- Matias-Guiu X, Stewart CJR. Endometriosis-associated ovarian neoplasia. Pathology. 2018 Feb;50(2):190-204.Pubmed PMID: 29241974.
- Moll UM, Chumas JC, et al. Ovarian carcinoma arising in atypical endometriosis. Obstet Gynecol. 1990 Mar;75(3 Pt 2):537-9. PubMed PMID: 2304731.
- Munksgaard PS, Blaakaer J. The association between endometriosis and ovarian cancer: a review of histological, genetic and molecular alterations. Gynecol Oncol. 2012 Jan;124(1):164-9. PubMed PMID: 22032835.
- Nishida M, Watanabe K, et al. Malignant transformation of ovarian endometriosis. Gynecol Obstet Invest. 2000;50 Suppl 1:18-25. PubMed PMID: 11093057.
- Ogawa S, Kaku T, et al. Ovarian endometriosis associated with ovarian carcinoma: a clinicopathological and immunohistochemical study. Gynecol Oncol. 2000 May;77(2):298-304. PubMed PMID: 10785482.
- Prefumo F, Todeschini F, et al. Epithelial abnormalities in cystic ovarian endometriosis. Gynecol Oncol. 2002 Feb;84(2):280-4. PubMed PMID: 11812087.
- Tanase Y, Furukawa N, et al. Malignant Transformation from Endometriosis to Atypical Endometriosis and Finally to Endometrioid Adenocarcinoma within 10 Years. Case Rep Oncol. 2013 Sep 21;6(3):480-4. PubMed PMID: 24163664.
- Terada T. Endometrioid adenocarcinoma of the ovary arising in atypical endometriosis. Int J Clin Exp Pathol. 2012;5(9):924-7. PubMed PMID: 23119109.
- Vercellini P, Viganò P, et al. Perimenopausal management of ovarian endometriosis and associated cancer risk: When is medical or surgical treatment indicated? Best Pract Res Clin Obstet Gynaecol. 2018 Aug;51:151-168. PubMed PMID: 29551389.