Endometriosis and ovarian and extra-ovarian cancer risk

Czernobilsky, B. and W. J. Morris (1979). "A histologic study of ovarian endometriosis with emphasis on hyperplastic and atypical changes." Obstet Gynecol 53(3): 318-23.

One hundred ninety-four cases of ovarian endometriosis, encountered during a 3-year period, were studied. Forty-three cases showed reactive epithelial changes, probably due to inflammation and regeneration. There were 4 cases of adenomatous hyperplasia. Severe epithelial atypism was seen in 7 patients (3.6%), 1 in conjunction with adenomatous hyperplasia. Although the areas of severe epithelial atypism in ovarian endometriosis may be of reactive origin, one must also consider the possibility that in some instances these atypical changes may constitute a neoplastic potential.

Brunson, G. L., D. L. Barclay, et al. (1988). "Malignant extraovarian endometriosis: two case reports and review of the literature." Gynecol Oncol 30(1): 123-30.

Two cases of adenocarcinoma arising in extraovarian endometriosis 19 and 8 years following abdominal hysterectomy and bilateral salpingo-oophorectomy are described. Both patients presented with hydronephrosis. One had been on chronic estrogen therapy. The literature is reviewed in reference to frequency, tumor type, and sites of occurrence.

Reimnitz, C., E. Brand, et al. (1988). "Malignancy arising in endometriosis associated with unopposed estrogen replacement." Obstet Gynecol 71(3 Pt 2): 444-7.

Malignant transformation of endometriosis is a well documented phenomenon. Although it occurs most commonly in the ovaries, there have been approximately 50 reported cases of extraovarian malignant transformation of endometriosis. This paper presents two cases of malignancy arising from a dormant focus of endometriosis after total abdominal hysterectomy, bilateral salpingo-oophorectomy, and exogenous estrogen replacement therapy. These malignancies are often well differentiated and may behave similarly to estrogen-induced endometrial carcinomas. **After removal of the ovaries of a premenopausal woman with endometriosis, the use of progestins in replacement therapy may reduce the risk of malignancy arising in endometriosis.**

Moll, U. M., J. C. Chumas, et al. (1990). "Ovarian carcinoma arising in atypical endometriosis." Obstet Gynecol 75(3 Pt 2): 537-9.

Malignant transformation is a rare but recognized complication of gonadal and extragonadal endometriosis. Morphologic documentation of the continuous transition from benign endometrioid epithelium through epithelial atypia to invasive carcinoma within the same organ is necessary to prove that the cancer arose from endometriosis. This stringent criterion, put forward by Scott, has rarely been fulfilled. We report a case with a chronologic association between ovarian endometriosis showing foci of atypia and a subsequent large clear-cell carcinoma arising in the same ovary 3 years later. We recommend close scrutiny of cellular atypia in endometriosis to define lesions that may be preneoplastic and require an extended surgical approach.

Zanetta, G. M., M. J. Webb, et al. (2000). "Hyperestrogenism: a relevant risk factor for the development of cancer from endometriosis." Gynecol Oncol 79(1): 18-22.

OBJECTIVE: Endometriosis is extremely common in developed countries. Obesity is a major health concern and may cause hyperestrogenism. Hormonal replacement, particularly unopposed estrogens after hysterectomy, is becoming popular. Because endometriosis is ectopic endometrium, hyperestrogenism (either endogenous or exogenous) may cause hyperplasia or transformation into cancer. This study was conducted to describe the main clinical and pathologic features of malignancies in endometriosis and define the treatment and outcome and to compare patients who had cancer arising in endometriosis with patients who had endometriosis but no cancer. METHODS: Patients who had tumors from endometriosis diagnosed from 1986 to 1997 were analyzed retrospectively. Each patient was matched with two control patients (endometriosis without cancer) treated during the same study interval. Clinical and epidemiologic variables were compared to identify risk factors for the development of cancer. RESULT: **We identified 31 patients with cancer developing from endometriosis. Fifteen women were obese, 9 had a history of endometriosis, and 9 were taking unopposed estrogen**. Endometrioid adenocarcinoma was the most common histologic type (16 patients). When the patients with cancer were compared with controls, no significantly higher risk for the development of cancer was found with prolonged use of unopposed estrogens or

with higher body mass index, but a trend was observed. When obesity and use of unopposed estrogens were considered together, the difference was statistically significant (P = 0.05). CONCLUSION: Hyperestrogenism, either endogenous or exogenous, is a significant risk factor for the development of cancer from endometriosis. The prevalences of endometriosis, obesity, and use of hormonal replacement therapy in women in developed countries are increasing, and this trend justifies the assumption that cancer developing in endometriosis might become more common in the future.