# Grade 2 endometrioid adenocarcinoma arising from adenomyosis of the uterus: report of a case

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**Summary**

Adenomyosis is defined by the presence of endometrial tissue (glands and stroma) within the myometrium and malignant transformation of adenomyosis in premenopausal women with normal endometrium is extremely rare. Adenocarcinomas arising within adenomyosis need to be distinguished from endometrial carcinomas which arise from the eutopic endometrium, then extend into preexisting adenomyosis of the uterine wall. We report a case of grade 2 endometrioid adenocarcinoma arising from an adenomyotic focus in the uterus.

*Key words:* Endometrioid adenocarcinoma; Adenomyosis.

## Introduction

Adenomyosis is a frequent disorder in women and endometrial carcinoma cases have had coexistent adenomyosis in 16-60% [1, 2]. However, adenocarcinoma arising from uterine adenomyosis with a normal endometrium is a very rare situation. We report the case of a 59-year-old woman with a pelvic mass diagnosed as endometrioid carcinoma arising from adenomyosis of the uterus.

## Case Report

The patient, a 59-year-old woman, was admitted to the gynecology clinic of Ege University Hospital with the complaint of pelvic pain. She had been in the postmenopausal period for nine years. Her surgical history included a cholecystectomy for gallstone disease and an umbilical hernia repair afterwards. Pelvic examination revealed a solid mass, 15 x 10 cm in diameter, located in the pelvis. Transvaginal sonography (TVS) showed a heteroechogenous pelvic mass involving the uterus, 15 cm in size. Pelvic computed tomography (CT) revealed a pelvic mass like a leiomyoma nodule filling the left lower quadrant of the pelvis. Preoperative tumor markers were as follows: CA125: 489 U/ml, CA19.9: 854 U/ml, CA15.3: 141 U/ml. Colonoscopy and mammography were both within normal limits. Laparatomic exploration revealed a solid mass originating from the fundus of the uterus adherent to the sigmoid colon 15 x 9 cm in diameter. Both ovaries were atrophic. The fragile mass was extirpated in pieces from the serosa of the sigmoid colon and the serosal defect was sutured. After extirpation of the mass, the remaining isthmic part of the uterus and both adnexa were removed. Three units of erythrocyte suspension were transfused during the operation. The postoperative period was uneventful except for a wound dehiscence.

Pathological findings showed solid mass pieces and the cut surfaces were coarsely trabecular in pattern. Microscopically, grade 2 endometrioid adenocarcinoma was discovered. Lymphovascular invasion was present. There was no tumor involvement of the endometrial cavity (Figures 1, 2, 3).

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## Discussion

The diagnostic criteria for carcinoma arising from adenomyosis are: 1) The carcinoma must not be situated in the endometrium or elsewhere in the pelvic area; 2) The carcinoma must demonstrate a direct transition from benign to malignant, and stroma with epithelial elements must be found; 3) Endometrial stromal cells must be present to support a diagnosis of adenocarcinoma arising from adenomyosis [3-5].

Hsu *et al*. [6] reported a grade 1 endometrioid adenocarcinoma in a focus of adenomyosis with normal proliferative phase endometrium. From a pathological point of view, distinguishing an adenocarcinoma that invades the myometrium and that of carcinoma exhibiting intramucosal extension into foci of adenomyosis is very important for accurate surgical staging [7]. For example women with endometrial adenocarcinoma extending directly (without myometrial invasion) into foci of adenomyosis have an excellent prognosis and need no further treatment [8, 9]. On the other hand myometrial invasion adjacent to foci of adenomyosis may require further therapy depending on the depth of myometrial invasion. Although radiologic modalities such as TVS, intraoperative sonography and magnetic resonance imaging may be used to predict myometrial invasion for endometrial cancer and thus the extent of surgical staging [10], ideally the pathologist is requested peroperatively to assess the depth of myometrial invasion. This is important to select patients for lymphadenectomy.

The prognostic features of adenocarcinomas arising from adenomyosis are not well described because of the rarity of the situation. Immunhistochemical studies have demonstrated that endometral carcinomas with p53 overexpression and lack of estrogen or progesterone receptor had poor prognosis [11]. Taskin and colleagues [12] studied 94 patients with endometrial adenocarcinoma, including those with adenomyosis and a control group with adenomyosis cases but without endometrial cancer. They failed to find p53 positivity by immunhistochem-

Fig. 1

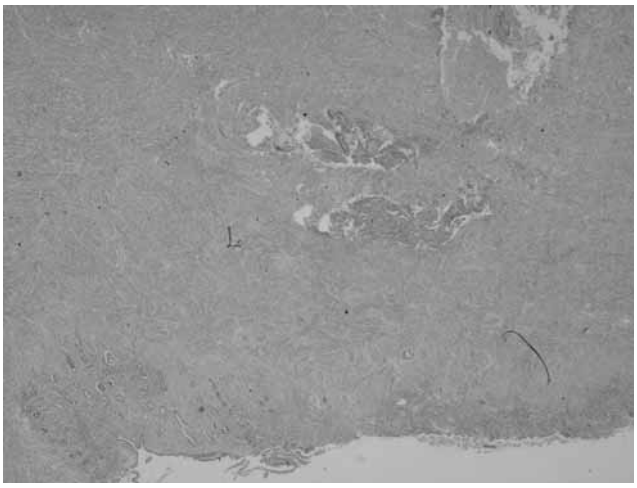

Fig. 2

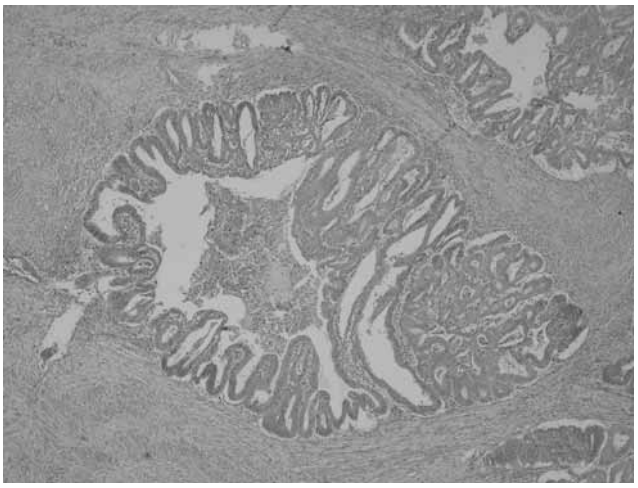

Fig. 3

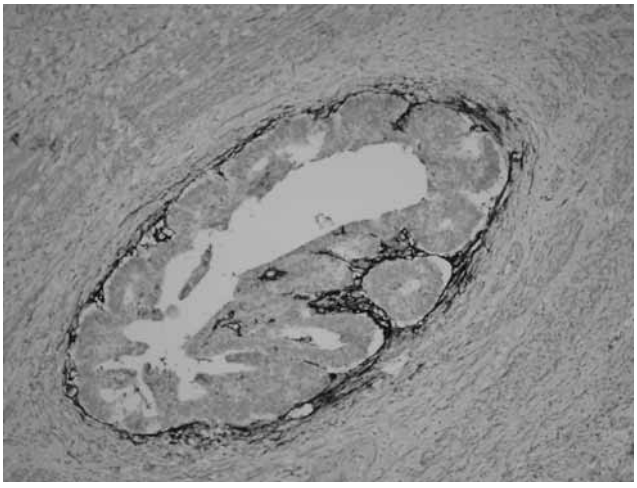

Figure 1. — Normal appearance of the endometrium and endometrioid adenocarcinoma in the adenomyosis foci (H&E x2).

Figure 2. — Endometrioid adenocarcinoma in the myometrial tissue (H&E x10).

Figure 3. — CD-10 positive endometrial stroma and adenocarcinoma component in the adenomyosis (anti-CD-10 X20).

istry in foci of adenomyosis without endometrial carcinoma; however, p53 was present in 7/28 (25%) cases of adenomyosis with co-existent endometrioid adenocarcinoma. It is therefore possible that a defect in the p53 tumor supressor gene may play an important role in the de novo neoplastic transformation of adenomyosis. Also studies have shown that endometrial adenocarcinoma arising from adenomyosis had a weak expression of hormone receptors compared with adenomyotic lesions that were strongly positive for estrogen receptors and progesterone receptors in all cases [3, 13]. This may indicate non-hormonal-dependent growth.

In summary we have reported a case of endometrioid adenocarcinoma arising in adenomyosis. The clinical importance of the present case is the grade 2 endometrioid adenocarcinoma with lymphovascular invasion originating from adenomyosis.

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