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Case Report Open Access

Vaginal Polypoidal Endometriosis Masquedering Malignancy in a Young Female

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Abstract

Endometriosis is ectopic presence of endometrial glands surrounded by endometrial stroma. Polypoidal endometriosis is a recently described entity which mimics neoplastic growth. Grossly and microscopically, polypoidal endometriosis can mimic benign and malignant tumors like adenofibroma, adenomyoma, low-grade stromal sarcoma, endometrial carcinoma and adenosarcoma. We report this case of polypoidal endometriosis of vagina which clinically mimicked an embryonal rhabdomyosarcoma. We present this case due to its rarity and to consider this entity as one of the possibilities of vaginal growths.

Keywords: Polypoidal vaginal endometriosis; Vaginal growth; Embryonal rhabdomyosarcoma

Introduction

Polypoidal endometriosis is a recently described entity, which can present as neoplastic growth. Microscopically, it has to be differentiated from benign and malignant conditions like adenofibroma, adenomyoma, low-grade stromal sarcoma, endometrial carcinoma and adenosarcoma. Recognition and management of endometriosis is important since it can develop into malignancy. We report a case of polypoidal vaginal endometriosis which clinically mimicked a malignancy. Polypoidal vaginal endometriosis should be one of the differential diagnoses in young women presenting with vaginal growth.

Case History

A 18-year-old nulliparous woman presented with excessive menstrual bleeding lasting for 8-10 days for past two months. The menarche was attained at 14 years and no other significant menstrual history was present except for excessive menstrual flow. There was no history of any hormonal intake. On per speculum examination, a polypoidal growth was observed on the postero-lateral wall of the vagina. Outer surface was smooth, gray to gray-brown in color. A clinical diagnosis of embryonal rhabdomyosarcoma, botryoid type was kept. Biopsy was taken from the polypoidal mass. A fragmented biopsy was received in department of Pathology. The fragments were gray-white to tan-brown in color and collectively measured 4 × 2 × 1.5 cm. Microscopic examination revealed multiple polypoidal masses lined by stratified squamous and pseudo-stratified columnar epithelium. Sub-epithelial tissue showed variably sized endometrial glands surrounded by endometrial stroma (Figure 1). In addition, there were fresh and old hemorrhages. The endometrial glands showed focal dilatation and cystic dilatation. In addition, dense lympho-plasmacytic infiltrate and thick walled blood vessels were also present. Stroma showed decidual changes. Glandular lumina showed mucus/granular eosinophilic debris/blood and inflammatory cells. There was no evidence of atypical or malignant cell. A histopathological diagnosis of vaginal polypoidal endometriosis was given.

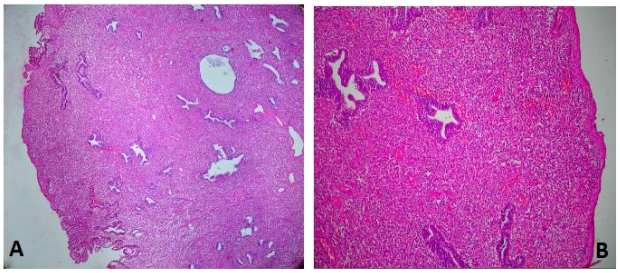

Figure 1: (a) Polypoidal mass lined by stratified squamous epithelium and sub-epithelial tissue shows variable sized cystically dilated endometrial glands surrounded by endometrial stroma (H&E, 10X). (b) Higher magnification showing dilated endometrial glands surrounded by endometrial stroma, stroma containing old and fresh hemorrhage (H&E, 40X).

Discussion

Endometriosis is defined as the presence of endometrial tissue outside the endometrium and myometrium. Usually, both endometrium and stroma are present, but, occasionally the diagnosis of endometriosis can be made when either of the two components is present. Two theories have been proposed for the pathogenesis of endometriosis: metastasis of endometrial tissue to its ectopic location called metastatic theory and metaplastic development of endometrial tissue at the ectopic site called metaplastic theory [1]. Metastatic theory explains the endometriosis involving the fallopian tube, peritoneal surface, surgical scars, vagina, cervix and pleural cavity. Pleural cavity is involved by passage of menstrual endometrium from peritoneal cavity through diaphragmatic defects, diaphragmatic lymphatics or both [1]. Metaplastic theory explains the demonstration of endometriosis in subjects in whom metastasis of normally situated endometrium could not occur or is highly unlikely, such as those with Turner's syndrome and pure gonadal dysgenesis who are amenorrheic and have hypoplastic uteri [2] and in males. Rare examples of

endometriosis have been described in men receiving long term estrogen therapy for prostatic cancer, the most common site being genitourinary tract [3]. Metaplastic theory is also potentiated by presence of other putative metastatic lesions of the peritoneum, such as diffuse peritoneal leiomyomatosis [4].

Endometriosis is often encountered at unusual sites like cervix, vagina, fallopian tube, intestine, urinary tract, skin, lymph nodes, soft tissue, skeletal tissue and nervous tissue [1].

Endometriosis in vagina is of two types - superficial and deep. Superficial endometriosis is common in the vault of vagina, is associated with trauma and lacks association with pelvic endometriosis [5]. The differential diagnosis of vaginal endometriosis, particularly of the superficial type, includes vaginal adenosis of the tuboendometrial variety; the latter however, lacks endometrial stroma and the characteristic inflammatory response of endometriosis [1]. Deep vaginal endometriosis is more common, is typically associated with pelvic endometriosis, and appears as nodular or polypoid masses involving the posterior vaginal fornix [5].

A special type of endometriosis called polypoidal endometriosis has been recently described in age group 23 to 89 years with solitary or multiple polypoidal masses in pelvis or abdominal cavity [6,7]. Polypoidal endometriosis has been reported various sites - vagina, ovary, fallopian tube, cervix, uterus, colon, omentum, bladder, paravaginal soft tissue, para-uretheral soft tissue and retroperitoneum [8-10].

Grossly, polypoidal endometriosis is smooth with red-brown gelatinous appearance and cut surface may be solid white or may show multiple cysts as reported by Laird et al. [8] and Dadhwal et al. [9] Grossly, it can be mistaken for a neoplastic growth. Schlesinger and Silverberg [7] have reported an association of polypoidal endometriosis with prior tamoxifen use. Dadmanesh et al. [11] have reported an association of polypoidal endometriosis with prior use of estrogen. However, there was no history of prior use of estrogens or tamoxifen in our patient. Microscopically, polypoidal endometriosis is composed of various sized endometrial glands surrounded by endometrial stroma. It has to be differentiated from adenofibroma, adenomyoma, low-grade stromal sarcoma, endometrial carcinoma and adenosarcoma [7]. Adenomyoma and adenofibroma consist of endometrial glands surrounded by muscle fibers and fibrous tissue respectively. The intervening stroma in endometriosis consists of spindle-shaped cells consistent with endometrial stromal cells. Immunohistochemical (IHC) staining with CD 10 confirms the spindle-shaped cells to be endometrial stromal cells [8]. In present case, the epithelial and stromal component were quite characteristic of endometriosis so, IHC was not done. Low-grade stromal sarcomas may show glandular differentiation. The differentiating feature between low-grade stromal sarcoma and endometriosis is the stroma. The stroma of low-grade stromal sarcoma shows pleomorphism, increased mitotic activity and predominance of stroma over epithelial component. Lack of architectural disarray, cytological atypia and paucity of mitotic figures are useful for differentiating endometriosis from endometrial carcinoma [12]. Adenosarcoma is characterized by peri-glandular condensation of stromal cells. Such condensation is not seen in endometriosis. Endometriosis is well demarcated from surrounding normal tissue and lacks the infiltrating borders of malignant conditions.

Isolated vaginal endometriosis is treated by surgical excision. When endometriosis is wide spread as in pelvic endometriosis, the treatment is hormonal in the form of gonadotrophin releasing hormone (GnRH). When endometriosis is widespread it may not be amenable to medical or surgical treatment and ophorectomy may be required [9,10]. In our patient, surgical excision was sufficient and patient was kept on regular follow up. It is important to recognize and manage polypoidal endometriosis of vagina because in a recent study of vaginal endometrioid adenocarcinoma, a strong association with vaginal endometriosis was found in 14 of 18 cases [13].

To summarize, vaginal polypoidal endometriosis is a distinct type of endometriosis that can be mistaken for a neoplasm. Microscopically it has to be differentiated from adenofibroma, adenomyoma, low-grade endometrial stromal sarcoma, adenosarcoma and endometrial carcinoma. Recognition of endometriosis is important since it has a potential to develop into malignancy.

We conclude that this condition should be considered in the differential diagnosis of polypoid lesions of the vagina.

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