

Papillary Endometrial Carcinoma: 1 Case Report and Review of the Literature

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Abstract

Papillary endometrial carcinoma is a rare and aggressive form of uterine cancer, distinct from the more common endometrioid types. It occurs mainly in post-menopausal women, in the absence of hyperestrogenism. Histologically, it is characterized by a complex papillary architecture and marked nuclear atypia. Diagnosis is based on histology and immunohistochemistry, enabling differentiation from serous carcinoma. Treatment is based on a multimodal approach combining surgery, chemotherapy and sometimes radiotherapy. Due to its aggressive nature, the prognosis remains guarded, with a high risk of recurrence and metastasis. Recognition of this entity is helping to optimize management and steer research towards more targeted therapies.

Keywords: Papillary Carcinoma, Endometrium, Uterine Cancer, Histology, Immunohistochemistry, Treatment, Prognosis, Type II, Aggressive Tumor

Abbreviations: MRI: Magnetic Resonance Imaging, p53: Tumor Protein 53, p16: Cyclin-Dependent Kinase Inhibitor 2A, CT: Computed Tomography, N+: Number of positive lymph nodes, N: Total number of lymph nodes examined, 5-year survival: Five-year overall survival rate, FIGO: International Federation of Gynecology and Obstetrics

Introduction:

Papillary endometrial carcinoma is a rare and poorly described histological form of endometrial cancer, often confused with serous carcinoma due to their morphological similarity. Although the majority of endometrial cancers are of the low-grade endometrioid type, this papillary variant presents distinct biological and clinical features, associated with more aggressive behavior. Histologically, it is an epithelial tumor with complex papillary structures, a fibrovascular axis and marked nuclear atypia. This form of tumor occurs mainly in post-menopausal patients, often

without a history of endometrial hyperplasia or prolonged exposure to estrogen, which distinguishes it from the more frequent type I forms [1]. Precise diagnosis is often difficult, and relies on rigorous histopathological and immunohistochemical criteria, essential to avoid underestimating the prognostic risk.

Case report:

A 63-year-old woman with no specific pathological history presented with 5 episodes of postpartum metrorrhagia dating back 5 months.

On clinical examination: presence of a 1.5 cm polyp of the anterior lip of the cervix with exocervical implantation + 5 mm polypoid lesion of the right lateral wall of the vagina (**figure 1**).

Pelvic ultrasound: 25 mm endometrial thickening (**figure 2**)

Pelvic MRI: heterogeneous endometrial thickening, enhanced after gadolinium injection, measuring 33 mm spread over 84 mm, this thickening appears to infiltrate almost the entire anterior myometrium. No effusion, no adenopathy. (**figure 3**)

Cervical biopsy: remodelled cervical ectropion.

Vaginal biopsy: fibroepithelial hyperplasia consistent with polyp.

Cervico-uterine smear: no signs of malignancy.

Endometrial biopsy: papillary endometrial carcinoma infiltrating the myometrium.

The patient underwent total hysterectomy without adnexal preservation + omentectomy + bilateral pelvic and lumbo-aortic curage, with anatomopathological study:

Total hysterectomy without adnexal preservation: invasive papillary endometrial carcinoma measuring 3.5 cm long axis, infiltrating more than 50% of the myometrium. Absence of images of vascular emboli and peri-nervous sheathing.

Omentectomy: no evidence of malignancy.

Bilateral pelvic and lumbo-aortic curage: absence of lymph node metastasis 0N+/10N.

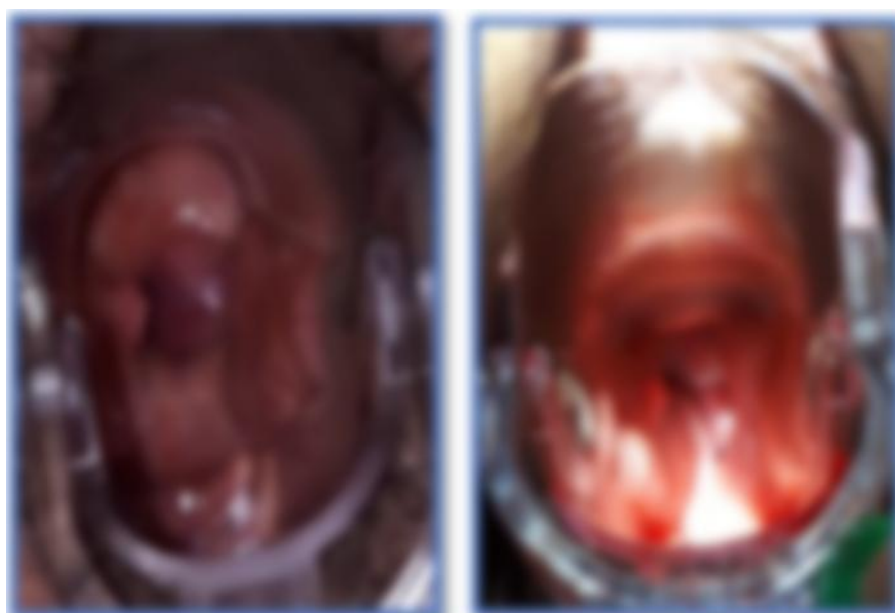


Figure 1: Speculum examination showing polypoid lesions of the cervix and vagina

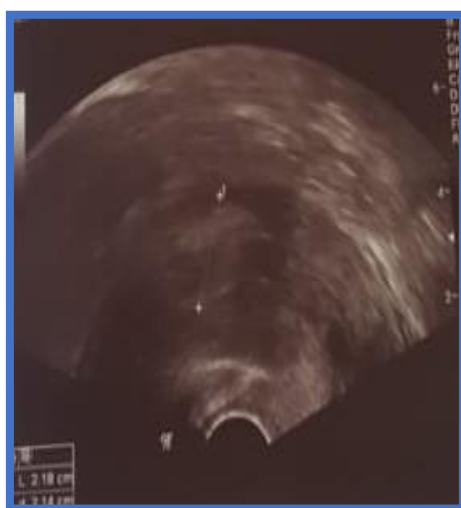


Figure 2: Ultrasound image of endometrial thickening



Figure 3: MRI image of endometrial thickening appearing to infiltrate the anterior myometrium

Discussion:

Papillary endometrial carcinoma is classified as a type II carcinoma, a group of non-oestrogen-dependent tumours with poor differentiation and a poor prognosis [2]. Its frequency is estimated at less than 5% of endometrial cancers, but it is probably under-diagnosed due to its morphological overlap with other entities, notably serous endometrial carcinoma. Histologically, it presents a complex papillary architecture, with a cell lining featuring severe nuclear atypia and frequent mitosis. Immunohistochemistry is often necessary to distinguish this form from other serous tumours: abnormal and diffuse expression of p53 and overexpression of p16 are often found in serous forms, whereas some papillary forms may show a more heterogeneous profile [3,4].

Clinically, papillary carcinoma usually manifests as post-menopausal metrorrhagia. Imaging can detect an endometrial mass, but only histological examination of an endometrial biopsy or surgical specimen can provide a definitive diagnosis. Treatment is mainly based on complete excision surgery (total hysterectomy with bilateral adnexectomy), often combined with pelvic and para-aortic lymph node dissection, depending on risk factors. Because of the high risk of locoregional and metastatic recurrence, adjuvant chemotherapy (often carboplatin and paclitaxel) is recommended for advanced or high-grade forms [5]. Radiotherapy, in particular vaginal brachytherapy, may be indicated as a complement. Targeted therapies have not yet

been validated for this subpopulation, although specific molecular abnormalities are being investigated.

The prognosis of papillary carcinoma is generally poor compared with well-differentiated endometrioid forms. Several studies have shown a 5-year survival rate of less than 50% in advanced stages, largely due to the propensity for early dissemination and chemoresistance [6]. Knowledge of this entity by pathologists and clinicians is therefore essential to ensure appropriate management.

Conclusion:

Papillary endometrial carcinoma is a rare but clinically significant tumor, due to its aggressiveness and unfavorable prognosis. Recognition is based on precise histopathological and immunohistochemical analysis. Optimal treatment requires a multimodal approach including surgery, chemotherapy and possibly radiotherapy. Better characterization of this tumor type, particularly through molecular analysis, will enable us to develop more targeted and potentially more effective therapeutic strategies in the future.

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