# "Intestinal-type" mucinous adenocarcinoma of the vulva: a report of two cases

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**Summary**

*Background:* "Intestinal-type" mucinous carcinoma of the vulva is extremely rare with very few cases reported in the literature. *Case report:* The authors report two patients who had diagnosis of intestinal-type mucinous adenocarcinoma of the vulva after excisional biopsy. In both cases, restaging was perfomed with total body computed tomography (CT) scan, gastroscopy, and colonoscopy that showed no other site of disease. A radical vulvectomy with bilateral systematic inguinal lymphadenectomy was performed, and in both cases no residual disease was found. A patient developed metastatic (liver, bone marrow) colonic cancer 36 months after primary surgery, received multiple lines of chemotherapy, and died of disseminated disease 18 months after diagnosis. The other patient was found to have dysplastic polyp in the sigmoid colon, and is alive without disease at 39 months after primary diagnosis. *Conclusion*: Intestinal-type mucinous carcinoma of the vulva has a poor prognosis. Strict endoscopic follow-up of the colon is mandatory in such cases, considering the high propensity of associated gastrointestinal (GI) tumors.

*Key words:* Adenocarcinoma of the vulva; Intestinal-type.

## Introduction

Primary adenocarcinomas of the vulva are rare and mostly originate from Bartholin's glands [1-5]. Other possible origins are sweat glands [1-8], Skene's glands [1-7], minor vestibular glands [1, 2, 4 5, 8], aberrant mammary tissue [1-8] or endometriotic implants [1, 5]. Villoglandular adenocarcinoma of colonic-type is a rare variant of vulvar adenocarcinoma of unknown origin, with only few cases reported to date on the vulva [1-5, 7] and in the vagina. It is characterized by villoglandular architecture, mucinous-type epithelium with intestinal differentiation (goblet cells), and direct apposition of the tumor with the surface epithelium. The possibility that these tumors may originate from cloacal remnants has been raised [1-6, 8]. In fact, Novak and Woodruff [9] were the first to propose that misplaced cloacal remnants could be found in the vulva. The hypothesis that such misplaced remnants may undergo malignant transformation into a villoglandular adenocarcinoma of colonic-type was raised later by Tiltman and Knutzen [4].

The authors report two additional cases and review the literature discussing this rare disease.

## Materials and Methods

*Case 1*

A 59-year-old, gravida 5, para 3, obese woman was referred to the hospital for a nodular vulvar lesion with mild discomfort and burning sensation. During vulvoscopy, a papillary epithelium with atypical vessels was seen on the left and posterior vestibular mucosa (Figure 1) and the lesion extended up to the hymeneal ring.

An excisional biopsy disclosed a well-differentiated adenocarcinoma of intestinal-type with mucin secreting cells. Hysteroscopy showed normal endometrium for patient's age, apart from a benign polyp. Transvaginal ultrasonography (TVUS) did not reveal ovarian abnormalities. GI endoscopy and colonscopy did not detect any lesion examing the esophagus, stomach, duodenum, and colon. CT scan was also negative. Tumor markers (AFP, CEA, CA125, CA15.3, CA19.9) were all within normal limits. Following patient's informed consent, a radical left emivulvectomy with colpectomy of the lower one-third, inguino-femoral lymphadenectomy, and panniculectomy were performed. Post-operative healing was good and the patient was discharged from the hospital six days after surgery. Follow-up was negative for 36 months, while a CT scan demonstrated two metastatic lesions in the liver and also pelvic and aortic nodes involvement. Colonoscopy showed a two by two cm lesion in the upper part of the rectum, and pathologic examination disclosed grade 2 mucinous adenocarcinoma. Fine-needle biospy of the bone marrow was consistent with secondary involvement. First line chemotherapy resulted in complete remission of all lesions, but six months later the patient developed diffuse recurrent disease, and the patient died of disease 18 months after diagnosis.

*Case 2*

A 42-year-old white woman, gravida 1, para 1, was referred for a small vulvar lesion of one cm. An incisional biopsy disclosed cloacogenic adenocarcinoma of the vulva. Complete restaging was perfomed with total body CT scan, gastroscopy, and colonoscopy that showed no other site of disease. The patient underwent complete surgery consisting in radical vulvectomy with colpectomy and inguino-femoral lymphadenectomy. Pathologic examination revealed adenocarcinoma of intestinal-type with vulvar-vagina, extension without nodal involvement. During follow-up with yearly colonoscopy, she was found to have dysplastic polyp in the sigmoid colon, which was radically resected. She is alive without disease at 39 months after primary diagnosis with no sign of recurrent disease.

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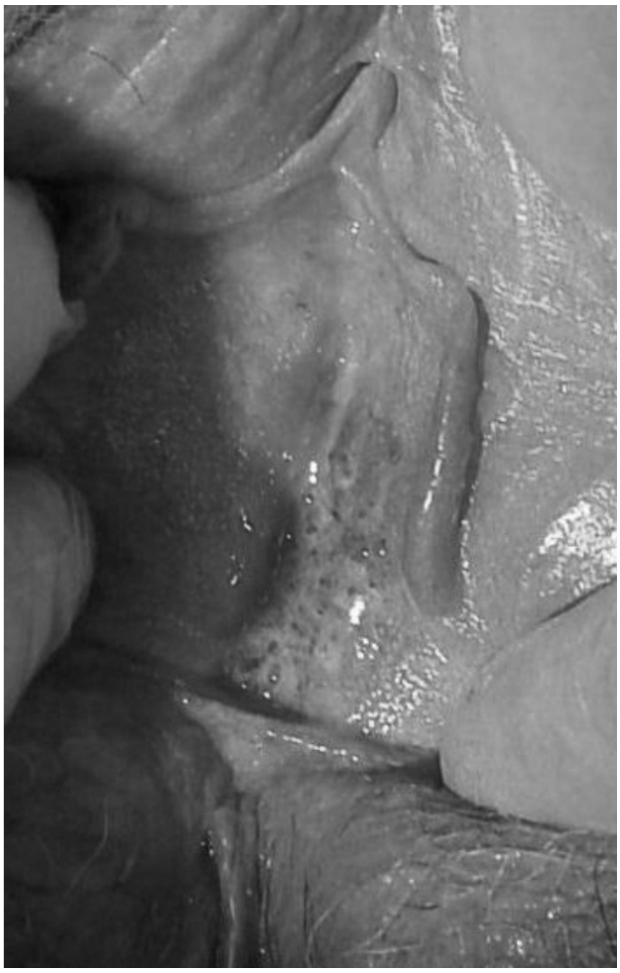

Figure 1. — Papillary epithelium with atypical vessels on the left and posterior vestibular mucosa.

## Discussion

To the knowledge of the authors, these are two other cases of mucinous carcinoma "intestinal-type" of the vulva, also known as adenocarcinomas of cloacogenic origin [1-5, 7]. The possibility that the lesion in the two patients might have been metastatic and of colonic origin was ruled out by a complete negative clinical workup. Furthermore, the immunohistochemical profile showed cytokeratin 7 expression, which is not consistent with an intestinal origin [10, 11]. Primary adenocarcinomas of the vulva are rare, but mostly arise from Bartholin's glands. Contrary to this case, Bartholin's glands adenocarcinomas are deeply infiltrative, do not involve the overlying epidermal surface, and an in situ component is usually present in the adjacent benign glands [2, 8]. A sweat gland origin is also unlikely because these adenocarcinomas lack this typical villoglandular pattern and do not contain diastase-resistant periodic acid-Schiff material [2, 3]. A paraurethral Skene's or minor vestibular gland origin has also been excluded because in this case, the tumor was located away from the introitus and the urethra. An origin from aberrant mammary tissue or endometriosis had been considered, but no endometriosis was found, and the tumor was significantly different from a breast and endometrioid carcinoma [11].

The histopathologic aspect of this case is in many aspects identical to that of the other seven similar cases reported elsewhere [1-5, 7, 11]. It consisted of a villoglandular adenocarcinoma in direct continuity with the epidermis. The immunophenotypic pattern [12] of this case, namely a strong cytokeratin 7 and weak cytokeratin 20 staining, is comparable to that in the case reported by Rodriguez *et al*. [7]. Such profile raises questions about the origin of this rare disease. Origin from an area of cloacogenic metaplasia has been suggested but remains speculative [1-6, 8]. In all the cases described, the clinical behavior of this rare malignant neoplasm seems to be rather indolent, and patients are generally doing well, either after radical vulvectomy or wide local excision. Bilateral inguinal lymph node dissection has been performed in four of the reported cases [1-4] and only one disclosed an ipsilateral metastasis [4]. Despite this apparent low-risk of metastasis, the authors' knowledge of this tumor is limited, and either ipsilateral or bilateral inguinal lymph node dissection appears to be indicated [11].

It is interesting to note that the first patient had recurrent disease in multiple sites after primary excision. The authors do not know whether this was a real rucurrence from the primary vulvar tumor or if it was a secondary metacronous intestinal cancer. However, also the second patient developed atypical colonic hyperplasia, suggesting that the colonic tract should be carefully evaluated, both at diagnosis and during follow-up, in these patients.

## Conclusions

Both pathologists and clinicians should be aware of the existence of this rare tumor. However, more cases are needed to fully understand its origin and to better establish its long-term prognosis.

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