

SCROTAL CUTANEOUS METASTASIS FROM RECTAL SQUAMOUS CELL CARCINOMA: A RARE EVOLUTION INTO A RARE TUMOR

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The scrotum is a rare site for metastases and represents less than 1% of the body's total surface area. Clinically, metastatic deposits in the scrotum can present in a variety of ways. They may appear as solitary cutaneous nodules, papules, plaques, or generalized induration or edema. Indeed, scrotum metastasis may be mistaken for other skin lesions since several dermatologic conditions can present with inflammation or dermatitis of the scrotum. Properly diagnosing cutaneous metastasis requires histopathological examination since the clinical appearances are, as described, highly variable and non-specific. We present a 63-year-old man with painless nodules on the scrotal skin. Excisional biopsy of the nodules revealed a metastasis from rectal squamous cell carcinoma. The incidence of this kind of tumors is estimated around 0.1–0.25 per 1000 colorectal neoplasms.

Key Words: cutaneous metastasis, squamous cell carcinoma, dermoscopy.

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Cutaneous metastasis has been reported, with increasing frequency, in 0.7% to 9.0% of patients with cancer and usually appears 2 to 3 years after the initial diagnosis [1].

Such metastases may represent the first sign of recurrent disease after treatment since 75% of these patients also have visceral metastases [2]. Infrequently, skin metastases may be seen as the primary manifestation of an undiagnosed malignancy. The most probable sites of cutaneous metastases are the skin of the anterior chest, followed by the abdomen and back [3]. The scrotum is a rare site for metastases and represents less than 1% of the body's total surface area. In a study performed by Lookingbill *et al.* [4], 420 (10.4%) of 4020 patients with cancer were found to have skin involvement; however, just one case had metastasized to the scrotum. Recently, Hoyt *et al.* [5] reviewed the published literature regarding patients who developed cutaneous metastasis to the scrotum from visceral cancer and identified 29 cases: the colon-rectum (34%), prostate (28%), and lung (14%) were the most frequent sites of tumor origin.

Clinically, metastatic deposits in the scrotum can present in a variety of ways. They may appear as solitary cutaneous nodules, papules, plaques, or generalized induration or edema [6]. Indeed, scrotum metastasis may be mistaken for other skin lesions since several dermatologic conditions can present with inflammation or dermatitis of the scrotum, such as cysts, neurofibroma, hemangioma, calcinosis cutis, lymphangioma, sclerosing lipogranuloma, and squamous cell carcinoma [7].

Properly diagnosing cutaneous metastasis requires histopathological examination since the clinical appearances are, as described, highly variable and

non-specific. Patients with scrotal metastasis usually have widespread metastatic disease with a poor prognosis; their life expectancy after diagnosis is estimated as being between 6 and 18 months [4]. Treatment is often unsuccessful; it may consist of local tumor excision, radiation therapy, and chemotherapy, but patients are often referred for palliative treatment. We present a 63-year-old man with painless nodules on the scrotal skin. Excisional biopsy of the nodules revealed a metastasis from rectal squamous cell carcinoma.

Case report. A 63-year-old male was referred to our department with asymptomatic, rapidly growing nodular lesions at the left scrotum that had been present for 3 weeks. At the clinical examination, there were numerous erythematous nodules of various sizes with a hard, elastic consistency on palpation and a tendency to flow together (Fig. 1, a). The inguinal region and penis were clinically intact. Dermoscopic evaluation revealed multiple arborizing and serpentine atypical vessels that radiated towards the periphery of the lesion with bright polygonal white areas (Fig. 1, b). The patient's past medical history revealed that an adenocarcinoma of the sigmoid-rectal junction (pT1N0) and a squamous cell carcinoma of the rectum (pT1N1) had been surgically resected 9 months before our examination.

Considering the physical examination and the patient's clinical history, a skin biopsy was performed. Histologically, the dermis was infiltrated by nests and sheets made up of crowded atypical polygonal cells and occasional central foci of keratin formation (Fig. 2, a–b). The tumor cells were positive for AE1/AE3, CK5/6 (Fig. 2, c), p40 (Fig. 2, d), p63, and, focally, for CK7 and negative for CK20 and CDX-2. A diagnosis of metastasis from poorly differentiated squamous cell carcinoma was rendered.

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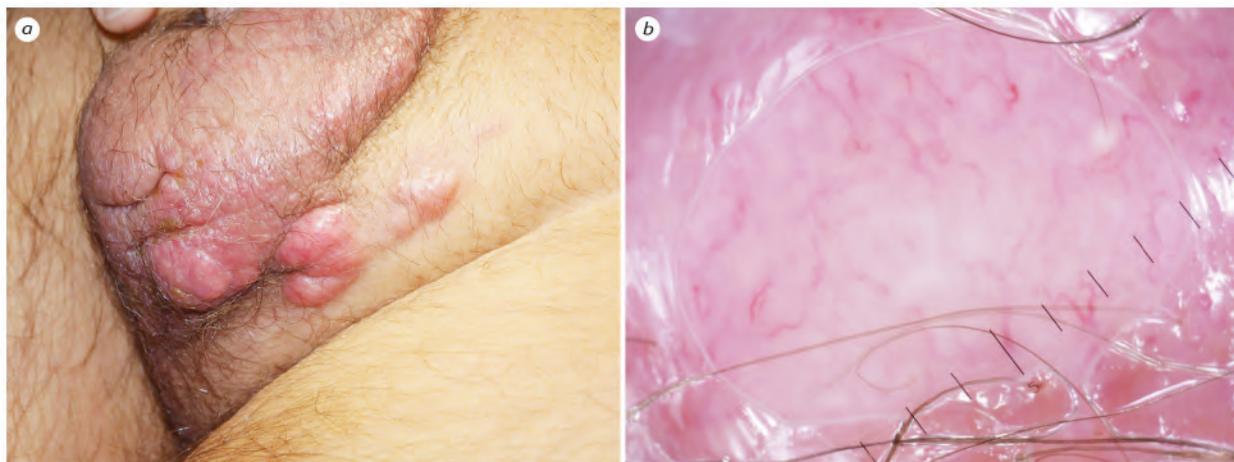


Fig. 1. At the left scrotum, there are numerous erythematous nodules of various sizes with hard elastic consistency on palpation and a tendency to flow together (a). Dermoscopic evaluation revealed multiple arborizing and serpentine atypical vessels radiating towards the periphery of the lesion with bright polygonal white areas (b) (63-year-old male)

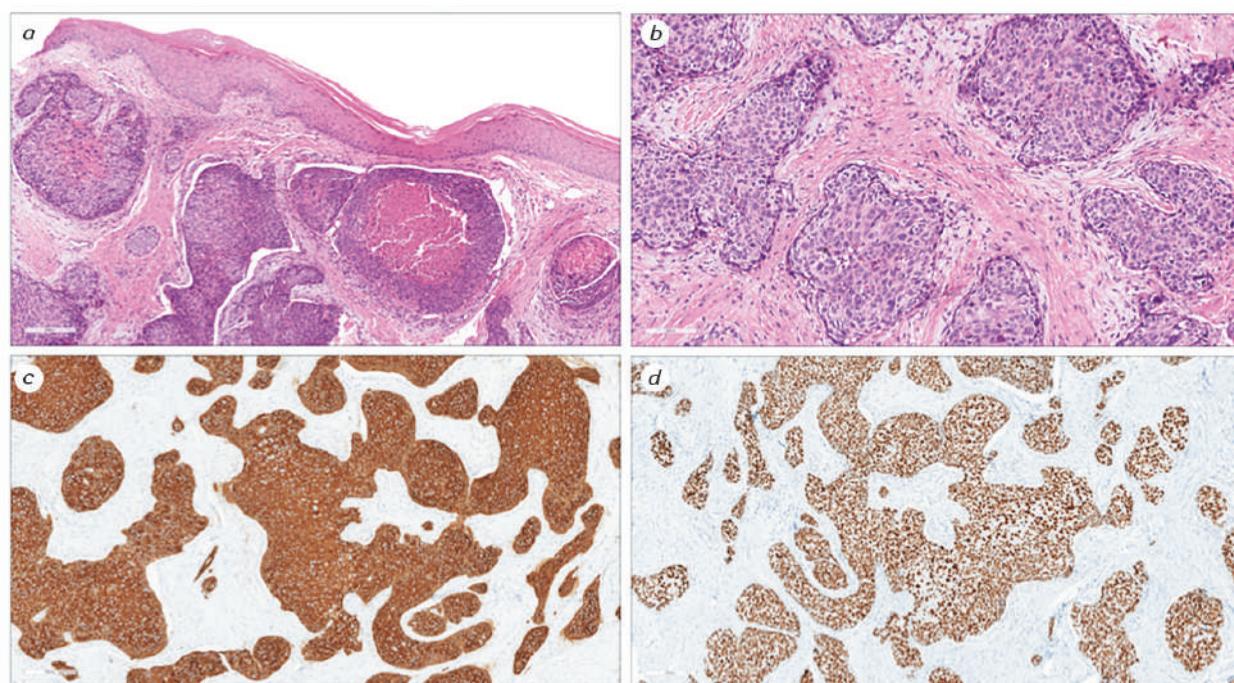


Fig. 2. Nests and sheets of atypical cells diffusely infiltrated the dermis with foci of central keratinization (a and b, haematoxylin and eosin staining, original magnifications $\times 10$ and $\times 20$, respectively). Tumor cells were positive for CK5/6 (c, original magnification, $10\times$) and p40 (d, original magnification, $\times 10$)

Computed tomography of the abdomen and pelvis demonstrated a locally invasive distal rectal neoplasm, with evidence of metastatic involvement of the mesorectal, perirectal, and internal iliac lymph nodes. Subsequent 18-fluorodeoxyglucose positron emission tomography showed a recurrence of the squamous cell carcinoma and a progression of the lymph nodes' involvement (rcT2rcN3). The patient underwent intensity-modulated radiation therapy (45 Gy/1.8 Gy fraction on the lymph nodes and 55 Gy/2.2 Gy on the rectal recurrence) combined with chemotherapy (mitomycin and 5-fluorouracil). Thereafter, in addition to skin metastases to the scrotum, the patient developed a generalized metastatic spread of rectal carcinoma to the lungs and liver and he died 3 months later of a cerebral insult.

Discussion. Colorectal cancer is the world's fourth-most deadly cancer (after lung, liver, and stomach cancers) [8]. Cutaneous metastases in colorectal cancer occur in approximately 4.4% of cases [9]. The most frequent sites of cutaneous metastases that originate from colorectal cancer are the chest, abdomen, and pelvis [10]. On the other hand, cutaneous metastases to the scrotum are very uncommon and are usually known to signify widespread disease with a discouraging life expectancy, which is estimated as being between 6 and 18 months [4].

In our case, the primary malignancy was a squamous cell carcinoma of the rectum, which is a very rare malignancy.

The incidence of this kind of tumors is estimated around 0.1–0.25 per 1000 colorectal neoplasms [11].

Given the disease's rarity, strong epidemiological data regarding patient natural history are lacking. However, several studies have described either synchronous or metachronous lesions of adenocarcinoma that occur in the large intestines of patients with squamous cell cancer of the rectum [11], as occurred in our patient. Surgery is the cornerstone in the management of this tumor; adjuvant chemotherapy and radiotherapy may have a role in treating advanced disease [12].

In summary, we presented the extremely rare case of a patient with a squamous cell rectal cancer who developed scrotal skin secondary cancer to emphasize the importance of an appropriate clinical examination of the skin surface during the screening and follow-up period of patients with colorectal cancer. Moreover, dermoscopy may help to identify such lesions by revealing atypical vascular patterns, such as the presence of serpentine vessels, arborizing vessels, or a mixed pattern of vascularity with vessels that originate centrally and radiate toward the periphery (in contrast to basal cell carcinoma, where vessels originate from the periphery of the lesion) [2]. In conclusion, any skin lesion should be suspected in patients with a prior history of malignant colorectal neoplasm because the prompt recognition of such tumors can affect prognosis and management and thus be of great significance.

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СКРОТАЛЬНИЙ ШКІРНИЙ МЕТАСТАЗ РЕКТАЛЬНОЇ ПЛОСКОКЛІТИННОЇ КАРЦИНОМИ: НЕЗВИЧАЙНИЙ РОЗВИТОК У РІДКІСНУ ПУХЛИНУ

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Мошонка є рідкісним місцем для метастазів і становить менше 1% від загальної площі поверхні тіла. Клінічно метастатичні ураження мошонки можуть проявлятися по-різному. Вони можуть бути представлені у вигляді поодиноких шкірних вузлів, папул, бляшок або генералізованого ущільнення чи набряку. Дійсно, метастази в мошонку можуть бути помилково прийняті за інші ураження шкіри, оскільки деякі дерматологічні стани можуть проявлятися запаленням або дерматитом мошонки. Належна діагностика шкірних метастазів вимагає гістопатологічного дослідження, оскільки клінічні прояви сильно варіюють і є неспецифічними. Представлено клінічний випадок у хворого віком 63 роки з безболісними вузлами на шкірі мошонки. Ексцизійна біопсія вузлів виявила метастаз плоскоклітинного раку прямої кишки. Захворюваність на такі пухлини оцінюється приблизно в 0,1–0,25 на 1000 колоректальних новоутворень.

Ключові слова: шкірні метастази, плоскоклітинний рак, дерматоскопія.