GE J Port Gastrenterol. 2012;**19(5)**:267–269

Jornal Português de Gastrenterologia
Portuguese Journal of Gastroenterology
www.elsevier.pt/ge

CLINICAL CASE

Neuroendocrine tumor of the anal canal

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Received 23 March 2011; accepted 24 June 2011
Available online 4 July 2012

KEYWORDS
Neuroendocrine tumor;
Anal canal;
Immunohistochemistry;
Metastic disease

Abstract We report a rare case of neuroendocrine tumor of the anal canal and its poor prognosis, plus discuss the need of immunohistochemical for an acurate diagnosis and to guide treatment.

PALAVRAS-CHAVE
Tumor neuroendócrino;
Canal anal;
Imunohistoquímica;
Doença metastática

Tumor neuroendócrino do canal anal

Resumo Relatamos um caso raro de tumor neuroendócrino do canal anal e seu mau prognóstico, bem como a necessidade de imuno-histoquímica para o diagnóstico correto e para orientar o tratamento.

Introduction

The anal canal tumors are unusual lesions whose frequence is about 1.5% of the gastrointestinal tract neoplasias.[1] The predominant histological type is the squamous cells cancer (SCC) (47%), followed by cloacogenic carcinoma and less commonly melanoma or mucinous adenocarcinoma.[2] In relation to the neuroendocrine tumor (NET) occurrence on this location, its undeniable rarity justifies this case report.

Case description

A 49-year-old woman presented with anal bleeding, small-caliber stool with purulent discharge and severe proctalgia

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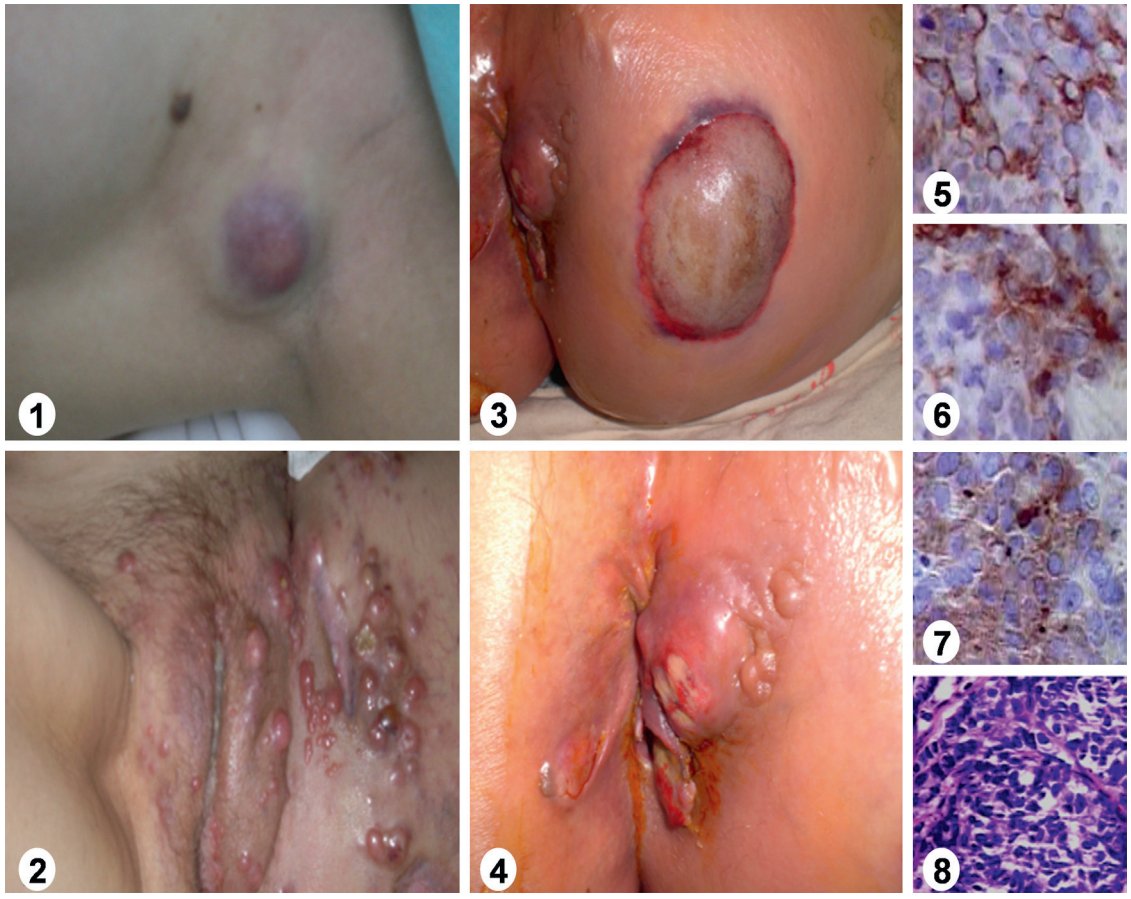
0872-8178/$ – see front matter
http://dx.doi.org/10.1016/j.jpg.2011.06.002

SCC	squamous cells cancer
NET	neuroendocrine tumor
CK	citokeratin
CgA	cromogranin A
NSE	neuron-specific enolase

in the last three months. She had no abominal pain, no bowel habit changes, no fever, no loss weight and no inguinal lymphadenopathy. Investigation was conducted by the Colorectal Service of Hospital de Base, São José do Rio Preto, and started in August 2007. Two perianal condylomas and a hard anal mass were detected in the rectal exam and the pathological evaluation revealed condylomatosis and a poorly differentiated, ulcerated and invasive SCC. The patient was treated with Nigro.

An incisional biopsy of the residual lesion was performed that resulted in no sign of malignancy. One year later, colonoscopy was normal and there were no metastasis in the imaging follow-up. After 7 months, the patient returned with 5 cm bilateral mammary and axillary protuberances (Fig. 1), right inguinal lymphadenopathy (Fig. 2) and ipsilateral thigh abscess (Fig. 3). In face of the possibility of canal anal tumor recurrence, it was sought colonoscopy and biopsy with immunohistochemical markers search in the potentially metastatic lesions. Neoplastic cells were immunoreactive for cytokeratin (CK) 35 (Fig. 6), cromogranin A (CgA) (Fig. 7) and neuron-specific enolase (NSE) (Fig. 8) that were compatible with metastatic high grade NET. The lamina revision of the primary anal lesion revealed poorly differentiated carcinoma (Fig. 5) in fibroconjunctive tissue with necrosis and angiolymphatic tumor embolization areas.

During the introduction of palliative chemotherapy with cisplatin and irinotecam, the patient developed enlargement of inguinal lymph nodes with abscesses and fistulization in addiction to Fournier syndrome. One month later, infected perianal metastases (Fig. 4) could be detected associated with recurrence of Fournier syndrome, contiguity intravaginal injury and septic shock treated with consecutive debridement, extended antibiotic therapy and estomal confection. Intraoperative findings included a metastatic mass in the greater omentum. Chemotherapy was discontinued because her immune status was impaired. Unfortunately she died in May 2009 from septic complications.



Figures 1–8 Axillary protuberance (Fig. **1**), inguinal lymphadenopathy (Fig. **2**) and right thigh abscess (Fig. **3**) appearance almost 2 years after the treatment with Nigro. Infected perianal metastases (Fig. **4**) could be detected during the palliative chemotherapy. Histology revealed a poorly differentiated SCC (Fig. **5**) and immunohistochemical staining was compatible with high grade NET by showing positive neoplastic cells for CK35 (Fig. **6**), CgA (Fig. **7**) and NSE (Fig. **8**).

Discussion

NET can originate in any part of the body, for example, lungs, skin, urogenital system, digestive tract, thyroid and adrenal.[3] When situated in large intestine (about 0.3-3.9% of all colorrectal tumors), they are histologically heterogeneous but share high aggressiveness[4] being more common in caecum, rectum and sigmoid. Anal location is rare and indicates a poor prognosis.[5,6] There is a variety of NET, rare and aggressive, with multidirectional differentiation, where are observed foci of this histological type, adenocarcinoma and SCC.[7] The clinical presentation of NET does not differ from colorrectal adenocarcinomas. However a more advanced tumor stage can be observed at the time of its diagnosis. Rarely there are manifestations of paraneoplastic syndrome, carcinoid (diarrhea and rash) and metabolic abnormalities.[8]

It was observed that the differentiation of an epithelial tumor into NET is an independent unfavorable prognostic factor.[9] For example, in relation to colorectal neoplasias, Thomas and Sobin (1995) found a 27% survival at 5 years for stages III and IV adenocarcinoma, but only three of 51 patients with the same staging and neuroendocrine differentiation remained alive for two years in that study.[10] Specific markers that may be used to establish neuroendocrine differentiation comprise NSE, CD56, CgA and synaptophysin, being the two latter recommended due to their relative sensitivity and specificity.[11] Immunohistochemical study is also critical to guide treatment, as Nigro is used for anal canal SCC, while surgical removal remains the best chance of cure for patients with NET.

Only early detection of the disease can result in some benefit on its evolution because adjuvant interventions such as radio and chemotherapy do not constitute an impact factor to improve survival in these cases. However new lines of chemotherapy are being developed using streptozotocin and 5-fluorouracil or doxorubicin with 5-fluorouracil.[12] Also palliative options such as surgery, manufacture of colostomy and radiotherapy should be evaluated to improve the life quality of patients with advanced disease.

Conflicts of interest

The authors have no conflicts of interest to declare.

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