

Small Cell Neuroendocrine Carcinoma of the Anorectal Region: About a Case Report and Review of the Literature

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Abstract

The histological study showed small, malignant cells with hyperchromatic nuclei and rare cytoplasm on hematoxylin eosin staining. Carcinoids of the anorectal region are rare, with an incidence of 0.14% of all rectal tumors and 0.7% of malignant tumors. They occur more easily in the second half of life. They are usually located in the colorectal area; their size is most often less than 2 cm. They are usually non-secreting and have a good prognosis. Poorly differentiated NETs or small cell carcinomas are even rarer, around 30 cases described in the literature. They represent less than 1% of cancers of the anorectal region. For some, they represent less than 0.2% of colorectal cancers. But it is difficult to estimate the real share of small cell carcinomas within anorectal cancers because of problems of definition, terminology (small cell carcinoma for some, oat cell carcinoma for others) and also the difficulty of diagnosis, especially before the use of immunohistochemistry [8]. The site of these tumors is difficult to determine, the anal canal itself or the lower rectum: we then speak more readily of anorectal tumors. The largest studies of NETs often even include the colon and rectum.

Keywords

Tumor; Carcinomas; Anorectal; Cancer; Radiotherapy

Introduction

Anal cancer is a rare tumor of the gastrointestinal tract that accounts for only about 2% of anorectal malignancies [1]. Most common anal cancers are squamous cell carcinomas and adenocarcinomas. Less common are basaloid carcinoma, melanoma, leiomyosarcoma and small cell carcinoma [1]. The latter, although very rare and of poor prognosis, is clinically important due to its aggressive clinical course with a tendency for early distant metastases. Small cell carcinomas

of the anus are oncologically similar to their counterparts in the lungs and are therefore treated in the same way.

We report a case of neuroendocrine small cell carcinoma of the anorectal region metastatic to the liver.

Case Presentation

Mrs A.Z, 65 years old, with no particular pathological history who presented for two months a rectal syndrome associated with rectorrhagia and anal pain all evolving in a context of apyrexia, anorexia and weight loss. There was no significant past or family. She was a non-smoker. On anorectal examination there was induration on the posterior surface of the anal canal extending to the middle rectum. The remainder of the physical examination was normal. Total colonoscopy revealed a budding ulcerative process extending from the anal canal to the middle rectum (posterior surface). The histological study showed small, malignant cells with hyperchromatic nuclei and rare cytoplasm on hematoxylin eosin staining. On immunostaining, the malignant cells were very positive for CD56 and showed weak focal positivity for CAM 5.2 and multinational strength. There was negative staining for CK7, CK20, thyroid transcription factor 1 (TTF-1), and common leukocyte antigen. These findings are consistent with small cell carcinoma of the anorectal region.

A TAP CT showed a locally advanced anorectal tumor lesion process; with suspicious pre-sacral lymphadenopathy, bilateral internal iliac and secondary hepatic localizations.

The patient was treated with six cycles of Etoposide Cisplatin-based chemotherapy with lesion stability and is currently in good control of her disease.

Discussion

Cancers of the anal canal are rare tumors. The prognosis for these cancers with essentially locoregional malignancies is relatively good, with five-year survival of 60 to 70% [2,3]. The most common histological type (90% of cases) is squamous cell carcinoma and its poorly differentiated variants called basaloid, cloacogenic or even transitional carcinoma, which are synonyms (Jass-Sobin). There are rare histological forms (adenocarcinomas, melanomas, neuroepithelioid tumors).

Carcinoids of the anorectal region are rare, with an incidence of 0.14% of all rectal tumors and 0.7% of malignant tumors [4,5]. They

occur more easily in the second half of life [6]. They are usually located in the colorectal area, their size is most often less than 2 cm. They are usually non-secreting and have a good prognosis [6,7]. Poorly differentiated NETs or small cell carcinomas are even rarer, around 30 cases described in the literature. They represent less than 1% of cancers of the anorectal region [4,8-10]. For some, they represent less than 0.2% of colorectal cancers [11]. But it is difficult to estimate the real share of small cell carcinomas within anorectal cancers because of problems of definition, terminology (small cell carcinoma for some, oat cell carcinoma for others) and also the difficulty of diagnosis, especially before the use of immunohistochemistry [8]. The site of these tumors is difficult to determine, the anal canal itself or the lower rectum: we then speak more readily of anorectal tumors. The largest studies of NETs often even include the colon and rectum [8,12,13].

Small cell carcinomas, unlike squamous cell carcinomas in the same area, affect both men and women of middle age. No risk factor has been established, however, there are three cases of anorectal small cell carcinoma in the literature in homosexual and HIV positive men [11,14] and two cases associated with ulcerative colitis [9,15], without any causal link having been proven. Small cell carcinomas are generally non-secreting or the hormone produced does not induce clinical translation. However, a case associated with clinically overt ACTH secretion has been described in a young man [16]. Currently the diagnosis of small cell carcinoma is made by the combination of two elements, the histomorphological appearance and at least two positive immunohistochemical reactions. In most cases, the markers are CGA and NSE [6,10-13,15-17]. The differential diagnosis of neuroendocrine small cell carcinomas includes malignant small cell lymphoma, poorly differentiated squamous cell carcinoma, poorly differentiated ADKs, melanoma, small cell sarcoma and primary neuroectodermal tumors (PNETs). In general, the prognosis for small cell carcinoma is severe.

Metastatic spread, in particular hepatic, is rapid, often even already present at the time of diagnosis [7,16,17,18,19]. The median survival rate for small cell carcinoma is estimated at one year [12,13]. The rarity of these small cell carcinomas of the anorectal region does not allow precise rules to be given regarding the treatment of this tumor. The readily metastatic nature, from the outset or in the short term, of these cancers encourages them to be compared to small cell bronchial cell carcinomas. An important place could thus be given to chemotherapy and in particular to cisplatin-based protocols [11,20,21]. We can discuss protocols based on 5-fluoro-uracil, or even mitomycin if we draw a parallel with cancers of the anal canal of the squamous type [2,22,23]. However, it has not been shown that small cell carcinoma of the anorectal region has the same chemosensitivity as that of the bronchi. Local treatment is also a problem. First-line radiotherapy is the logical treatment if we equate these cancers with squamous cell cancers of the anal canal. However, it is possible that the radio sensitivity of these cancers is less good than that of squamous cell carcinomas in this region. In this case, the persistence at the end of irradiation of an unsterilized tumor should lead to discussion of an abdominoperineal amputation, but this is not necessarily obvious given the mutilation that it imposes in a context of high metastatic risk and death sooner or later.

The case we report illustrates quite well the problem posed by small cell carcinomas of the anorectal region. Their nosological framework is not easy to define, it sits at the top of the anal canal or at the base of the rectum, and their ulcerative appearance brings them closer to rectal lesions of the adenocarcinoma type.

Histological aspects, immunostaining are the basis of the diagnosis. Their prognosis appears severe with a high risk of early liver metastases.

The treatment remains difficult to codify. Chemotherapy is the main modality of treatment. It is based on Cisplatin and Etoposide. Radiation therapy is primarily for local control and symptom relief [1]. The response to chemotherapy is 70% to 90% if transient. Generally, a good response to initial therapy is followed by little relapse or rapid progression with a median survival of only 6-12 months [1].

Conclusion

Small cell neuroendocrine carcinomas of the anorectal region are rare but deserve to be individualized because of their severe prognosis related to the frequency of Liver and lung metastases. Immunocytochemistry is required for diagnosis. Chemotherapy is the basis of treatment, even if the response is short-lived. Radiotherapy is mainly for local control and symptom relief.

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