Basaloid squamous cell carcinoma of the rectum. Case report

Romańczyk A. [1 A-D], Ustymowicz K.[1 A-D], Ustymowicz W.[1 A-D], Pawluczuk J.M.[2 A-D], Pryczynicz A.*[3 E,F], Guzińska-Ustymowicz K.[3 E,F]

1. Medical University of Warsaw, Poland
2. Medical University of Gdańsk, Poland
3. Department of General Pathomorphology, Medical University of Bialystok, Poland

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ABSTRACT

Introduction: SCC is a subtype of epithelial origin tumors that are common in glandular organs such as the lungs and pancreas, but are relatively rare in the large intestine. Pure squamous cell carcinoma (SCC) of the colorectum is extremely rare.
Case presentation: A 47-year-old woman was admitted to the hospital for surgical treatment of a rectal tumor initially diagnosed as a neuroendocrine tumor. She underwent neoadjuvant chemotherapy followed by laparoscopic abdomino-perineal resection of the rectum. Collected tissues of the tumor underwent histopathological evaluation in which the infiltration of BSCC (G2) was described. The p16 antigen were positively expressed in immunohistochemistry, which indicates an existing HPV infection with high oncogenic potential.
Conclusions: It is certain that only histopathological diagnosis can give a reliable diagnosis of SCC and enable the implementation of appropriate treatment in the case of unresectable lesions.
Keywords: squamous cell carcinoma, SCC, basaloid squamous cell carcinoma, BSCC

***Corresponding author**
Anna Pryczynicz, PhD,
Department of General Pathomorphology, Medical University of Bialystok, Waszyngtona Str 13, 15-269 Bialystok, Poland; e-mail: anna.pryczynicz@umb.edu.pl, tel: +48 85 7485996

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INTRODUCTION

Adenocarcinoma is the most common type of colorectal cancer. Squamous cell carcinoma (SCC) is less frequent. SCC is a subtype of epithelial origin tumors that are common in glandular organs such as the lungs and pancreas, but are relatively rare in the large intestine. Pure squamous cell carcinoma (SCC) of the colorectum is extremely rare. A subtype of SCC is basaloid squamous cell carcinoma (BSCC), which is usually located in the upper digestive tract, respiratory tract and anal canal [1]. In histological studies, BSCC is described as hyperchromatic basaloid cells and tumor nests with eosinophilic infiltration [2].

CASE REPORT

A 47-year-old woman admitted to the hospital for the surgical treatment of a rectal tumor. From the previously performed colonoscopy, tumor sections were taken and send to the histopathological examination which revealed an infiltration of neuroendocrine carcinoma stage G2. Subsequently MRI was performed in the TSE, FSE and DWI sequences. A 42 mm solid rectal/anal canal infiltration was described, without any signs of crossing the intestinal wall, no signs of vascular infiltration, with suspected involvement of the left common iliac lymph nodes and left obturator lymph nodes. The local advancement stage was T3a N1. The patient underwent neoadjuvant chemotherapy, 6 cycles of cisplatin with etoposide. Then, after completed the neoadjuvant treatment with saved timeof the treatment, doctors performed laparoscopic abdominoperineal resection of the rectum. The material from the laparoscopy was sent for histopathological evaluation which revealed the infiltration of BSCC (G2). In the immune-histochemy examination the CKHMW, p16 antigens were positively expressed. Expression of p16 indicates potential infection with HPV with high oncogenic potential. Due to the discrepancy in preoperative and postoperative histopathological diagnoses, the patient underwent complementary radiochemotherapy. The control MRI of the small pelvis revealed an enlargement of the obturator lymph node on the right side with a maximum dimension of 7mm. The control CT of the right lung revealed small nodules in segment 3 with a maximum dimension of 4 mm. Close observation and radiological control of the detected lesions was recommended. Subsequent control CT revealed new changes and an increase in previously observed changes. The new dimensions of the lesions was: 9mm (previously 4mm) segment 3 in the right lung and 4mm (previously not observed) segment 6 in the left lung. A PET-CT scan was performed in which two lung lesions suspected of metastasis and three lymph nodes in the pelvis were found. In another CT examination, changes in the lungs and the small pelvis were found to evolve further. In the right lung in segment 3 an increase to 14mm (9mm in the previous study), in the left lung in segment 6 to 4mm (unchanged) and an enlargement of the right obturator lymph node to 13mm (7mm in the previous study). The patient underwent palliative treatment in the form of chemotherapy with paclitaxel with carboplatin due to dissemination of squamous cell carcinoma of the rectum. Systemic treatment with nivolumab and Steorotactic Body Radiation Therapy (SBRT) for the treatment of active lung lesions is considered.

DISCUSION

Pure SCC of the large intestine is a very rare neoplasm, the first records of such a location of this tumor come from 1919 [3]. In the differentiation of neoplasms in the anorectal region, adenocarcinoma, neuroendocrine tumors, basal cell carcinoma and SCC should be taken into account. Due to the rarity of SCC in this localization, it is difficult to establish the appropriate diagnostic criteria. The assessment of morphology in conjunction with immune-histochemical diagnostics may be helpful in the correct diagnosis of BSCC [4]. Basal cell carcinoma shows the greatest morphological similarity to BSCC. Usually, basal cell carcinoma is positive for bcl2 and Ber-EP4 in immune-histochemical tests which is not common for BSCC [5]. On the other hand, the immunohistochemical markers CDKN2A and SOX 2 seem to be frequently presented in BSCC, while their expression was not observed in basal cell neoplasm [5]. Rectal BSCC may be derived from squamous metaplastic epithelium, cloacogenic embryologic nests, or totipotential basal cells that are present in colonic mucosa [6]. Among the SCC variants, BSCC shows the highest affinity for highly oncogenic HPV (16 and 18) [7], as was observed in our patient in preformed immunohistochemical staining which showed possitive expression of CKHMW [fig. 1], p16 [fig. 2].

The presented symptoms, diagnostics and staging in SCC are usually very similar to those in adenocarcinoma in this area. Usually, the course of both of the above types of tumors is malignant and is diagnosed at a high stage [1]. SCC is usually more locally advanced with local lymph node involvement compared to adenocarcinoma.

The primary treatment for colorectal SCC is surgery whenever possible. Our patient underwent surgical treatment combined with neoadjuvant chemotherapy in the cisplatin-etoposide regimen in 6 cycles, we initially obtained satisfactory local treatment results with a later probable distant recurrence in the lungs. Steorotactic Body Radiation Therapy (SBRT) may be considered in the treatment of local recurrences of SCC in the lungs [8]. The 5-

year colonic and rectal SCC survival rate varies between 32-86% in the literature, with stage I-III rectal SCC approximately 52.3% and stage IV rectal SCC approximately 18.2% [9].

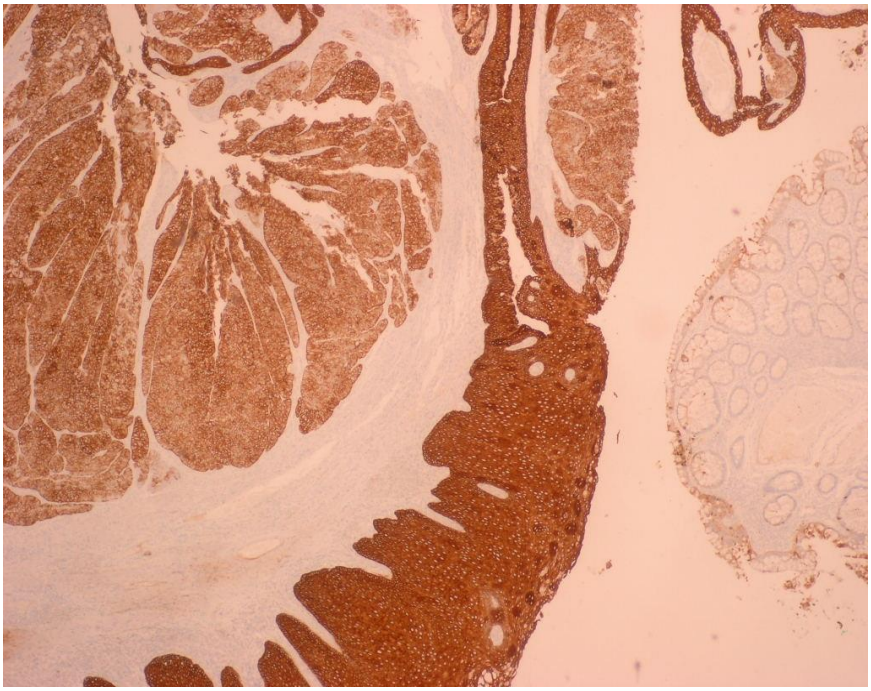

Figure 1. Possitive expression of CKHMW

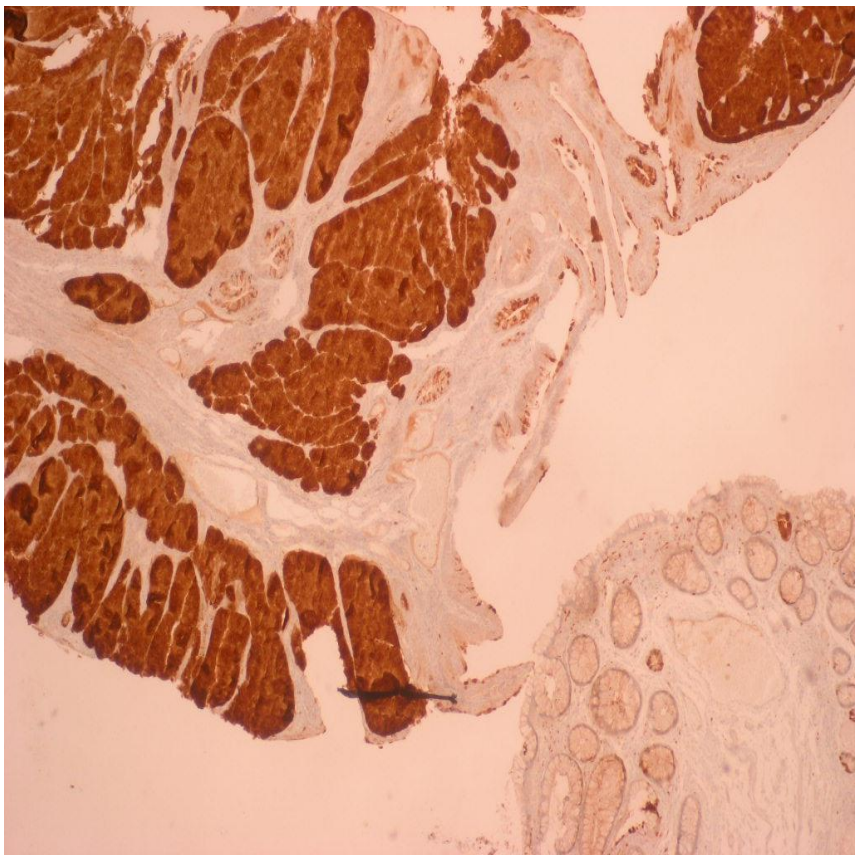

Figure 2. Possitive expression of p16

CONCLUSIONS

Due to the rarity of SCC and the varied picture related to its localization, it is difficult to formulate clinical diagnostic criteria. Perhaps it is worth considering using the criteria of Miyamoto et al. in the diagnostic process in patients with a lesion of the large intestine. It is certain that only histopathological diagnosis can give a reliable diagnosis of SCC and enable the implementation of appropriate treatment in the case of unresectable lesions.

ORCID

Romańczyk, Adrian
https://orcid.org/0000-0002-3471-4218
Ustymowicz, Konstancja
https://orcid.org/0000-0001-8678-320X
Ustymowicz, Wiktoria
https://orcid.org/0000-0002-5550-3452
Prycznicz, Anna
https://orcid.org/0000-0002-2786-7179
Guzińska-Ustymowicz, Katarzyna
https://orcid.org/0000-0002-0479-3509

Conflicts of interest

The authors have declared no conflict of interest.

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