Squamous cell carcinoma of the middle rectum: Report of a case and literature overview

Stefano Scaringi, Damiano Bisogni *, Luca Messerini, Paolo Bechi

Second General Surgery, Department of Surgery and Translational Medicine, Careggi Teaching Hospital, Florence, Italy

A R T I C L E   I N F O

Article history:
Received 12 August 2014
Received in revised form 25 October 2014
Accepted 29 October 2014
Available online 5 November 2014

Keywords:
Squamous cell carcinoma
Middle rectum
Synchronous ureteral tumor
Radiotherapy

A B S T R A C T

INTRODUCTION: Squamous-cell carcinoma (SCC) of the middle rectum is a rare disease with an estimated incidence of 0.1–0.25/1000 colorectal neoplasms. Literature is represented essentially by case report and short series, and only seventy-six cases of colorectal squamous carcinoma have been documented in literature.

PRESENTATION OF CASE: We report the case of a SCC of the middle rectum, associated to an ureteral inverted papilloma, occurred in a patient with a past history of prostate cancer treated with prostatectomy and radiotherapy.

DISCUSSION: Colorectal squamous-cell carcinoma is a rare disease. This localization is more frequent than the right colon, but no more epidemiological informations are actually available apart from a slight predominance of the female sex. Risk factors for SCC of the rectum are unknown and many hypotheses have been evoked. Because of its rarity, the interpretation of available information is clouded by a lack of uniformity in diagnosis and treatment.

CONCLUSION: Treatment of SCC remains very challenging, and the acquisition of more consistent data is needed.

© 2014 The Authors. Published by Elsevier Ltd. on behalf of Surgical Associates Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/3.0/).

1. Introduction

Squamous cell carcinoma (SCC) of the middle rectum is a rare disease with an estimated incidence of 0.1–0.25/1000 colorectal neoplasms. Literature is represented essentially by case report and short series. Since Schmidtmann in 1919 reported the first case SCC of the colon,1 76 cases of colorectal squamous carcinoma have been documented. Risk factors for SCC of the rectum are unknown and many hypotheses have been evoked. Because of its rarity, the interpretation of available information is clouded by a lack of uniformity in diagnosis and treatment.2

We present a case of SCC of the middle rectum, associated to an ureteral inverted papilloma, occurred in a patient with a past history of prostate cancer treated with prostatectomy and radiotherapy.

2. Presentation of case

A 73-year-old man consulted to emergencies for peri-anal pain. He was complaining for pelvic discomfort and constipation associated to rectal bleeding from about 8 months. He had a family history of colonic malignancy and a past history of prostate cancer (pT3N1), treated with prostatectomy, hormonal therapy and radiotherapy seven years before. Physical examination was normal, while rectal exploration demonstrates a mass involving half circumference of the middle rectum on the posterior and left aspect of the pelvis. Blood samples showed a moderate anemia with hemoglobin at 11.2 g/dl. Colonoscopy revealed a large lesion of the middle rectum, at 7 cm from the anus (Fig. 1); the underlying mucosa, as well as the anus were normal. Biopsies demonstrate a squamous cell carcinoma. Trans rectal ultrasound revealed a contact of the tumor with the left aspect of the pelvis and enlarged lymph nodes. The CT scan confirmed the local extension, demonstrating the absence of distant or nodal metastasis, while a solid lesion of the right ureter close to the right iliac cross, suggestive for urothelial neoplasm was incidentally founded (Fig. 2).

After multidisciplinary discussion neoadjuvant treatment was excluded because of the previous radiotherapy for prostate cancer. The patient was addressed to surgical treatment. A lower anterior resection with total mesorectal excision combined to the right ureteral resection was performed. Histology confirmed an atypical squamous cell rectal cancer, that was classificated pT3N1, and an inverted papilloma of the right ureter (Fig. 3). Post-operative outcome was uneventful. Patient died 4 months later for local recurrence and distant dissemination (nodal and pulmonary).

3. Discussion

Colorectal squamous cell carcinoma is a rare disease. The first case of SCC of the rectum was described by Raiford in 1933.1 This
Fig. 1. Vegetating and partly ulcerated lesion of middle rectum. The cancer has spread to several centimeters into the rectum, occupying more than half of the circumference.

localization is more frequent than the right colon, but no more epidemiological informations are actually available apart from a slight predominance of the female sex.\textsuperscript{1,2}

The aetiopathogenicity of SCC is unknown, but several causes have been evoked. It is general opinion that the radiation exposure might play a role in inducing metaplasia and cancer degeneration. In the present report radiotherapy could be evoked because of the radiant exposure for the treatment of prostate cancer seven years before. Moreover, the presence of a synchronous pelvic tumor in the same irradiated field (inverted papilloma of

Fig. 2. (A) CT scan showing solid lesion of the right ureter close to the right iliac cross, suggestive for urothelial neoplasm. (B) CT scan showing the presence of middle rectum lesion, involving more than half of the circumference. Evidence of possible involvement of the lymph nodes of mesorectum.

Fig. 3. Squamous epithelial cells in the context of glandular mucosa infiltrating the submucosa. The simple tubular glands show superficial hyperkeratinization. Evidence of extensive infiltration of lympho-monocytic cells in the submucosa (hematoxylin–eosin ×20).
consistent data is needed. Patients should be addressed to hospitals at high volume of colorectal procedure, in order to assess the best standard of care.

Conflict of interest

The authors declare no conflicts of interest.

Funding

The authors declare no source of funding for their research.

Ethical approval

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Author contributions

All authors contributed to the manuscript as follow: Stefano Scaringi contributed to conception, editing and revision; Damiano Bisogni contributed to acquisition of data and revision; Luca Messerini contributed to histological revision and editing; Paolo Bechi contributed revision and final approval of the version to be published.

References

1. Kassir R, Baccot S, Bouvieriu N, et al. Squamous cell carcinoma of the rectum: literature review. Int J Surg Case Rep 2014;5:86–90.
2. Dyson T, Draganov PV. Squamous cell cancer of the rectum. World J Gastroenterol 2009;15:4380–6.
3. Ouban A, Nawab RA, Coppola D. Diagnostic and pathogenetic implications of colorectal carcinomas with multidirectional differentiation: a report of 4 cases. Clin Colorectal Cancer 2002;1:243–8.
4. Michelassi F, Mushove LA, Stipa F, et al. Squamous-cell carcinoma of the colon. Experience at the University of Chicago, review of the literature, report of two cases. Dis Colon Rectum 1988;31:228–35.
5. Jaworski RC, Biankin SA, Baird PJ. Squamous cell carcinoma in situ arising in inflammatory cloacogenic polyps: report of two cases with PCR analysis for HPV DNA. Pathology 2001;33:312–4.
6. Williams GT, Blackshaw AJ, Morson BC. Squamous carcinoma of the colorectum and its genesis. J Pathol 1979;129:139–47.
7. Nahas CS, Shia J, Joseph R, et al. Squamous-cell carcinoma of the rectum: a rare but curable tumor. Dis Colon Rectum 2007;50:1393–400.
8. Anagnostopoulos G, Sakorafas GH, Kostopoulos P, et al. Squamous cell carcinoma of the rectum: a case report and review of the literature. Eur J Cancer Care (Engl) 2005;14:70–4.
9. Nigro ND, Seydel HG, Considine B, et al. Combined preoperative radiotherapy and chemotherapy for squamous cell carcinoma of the anal canal. Cancer 1983;51:1826–9.
10. Clark J, Cleator S, Goldin R, et al. Treatment of primary rectal squamous cell carcinoma by primary chemoradiotherapy: should surgery still be considered a standard of care. Eur J Cancer 2008;44:2340–3.
11. Rasheed S, Vap T, Zia A, et al. Chemo-radiotherapy: an alternative to surgery for squamous cell carcinoma of the rectum – report of six patients and literature review. Colorectal Dis 2009;11:191–7.
12. Raffield TS. Epitheliomata of the lower rectum and anus. Surg Gynecol Obstet 1933;57:21–35.
13. Ajani JA, Winter KA, Gunderson LL, et al. Fluorouracil, mitomycin, and radiotherapy vs fluorouracil, cisplatin, and radiotherapy for carcinoma of the anal canal: a randomized controlled trial. JAMA 2008;299:1914–21.
14. Wang JF, Wang ZX, Xu X, Wang C, Liu JZ. Primary rectal squamous cell carcinoma treated with surgery and radiotherapy. World J Gastroenterol 2014;20(April (14)):4106–9.