Case Report

Anal Necrosis as a Rare Complication: A Case Report

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Abstract

A 60-year-old woman with a history of obesity (BMI: 35), hypertension, DM type 2 presented with a recurrence of anal squamous cell carcinoma after local resection and radiotherapy. Regarding the stage IIIB, a patient was treated with local chemoradiotherapy. On this background, she presented to the emergency room with perianal pain, which has not diminished after habitual analgesic intake, and ulcerated wound in the mentioned region that was reported to worsen within the course of treatment. After the establishment of diagnosis of post-radiotherapy anal necrosis and possible tumor recurrence, the local treatment was initiated until a good granulation tissue was obtained and no signs of local infection were observed. A surgical intervention was decided to be done further. A cylindrical abdominoperineal amputation and perineal reconstruction were performed (epiploplasty+synthetic mesh and bilateral V-Y flap). The pathology report showed signs of complete tumor regression. No recurrence has developed during the follow-up period of 20 months.

Keywords: Anal cancer; Squamous cell carcinoma; Radiotherapy; Dermatitis

Introduction

Treatment of anal squamous cell carcinoma requires chemoradiotherapy as it was proved to be an optimal curative procedure for many patients allowing to preserve the anal sphincter. Clinical guidelines recommend initial chemoradiotherapy instead of surgery for most patients with squamous cell cancer of the anal canal. The implementation of modern radiotherapy techniques has led to a significant reduction in the incidence and severity of the associated skin toxicity. However, the rates of radiation dermatitis as a common complication of radiation therapy still remain high [1]. Hereby, we describe a case of severe radiation dermatitis in a patient after intensity-modulated radiotherapy for squamous cell carcinoma of the anus with a following surgical treatment.

Clinical Case

A 60-year-old woman was under follow-up by dermatologist for perianal pruritic lesions of the midline incision wound sizing up to 1.5 cm during 4 years after the extirpation of perianal lesion. The pathology data regarding the removed tumor showed an ulcerated and infiltrating well-differentiated squamous cell carcinoma with free resection margins. In June 2013, a biopsy of the newly appeared lesion in this region (suspected as a recurrence of squamous cell carcinoma) was performed for staging-T1N0M0. A treatment with brachytherapy (60 Gy) and mitomycin was applied. The patient did not present for a scheduled follow-up for personal reasons. In June 2014, she started suffering from perianal pain. The lesion grew larger, and a new recurrence of the well-differentiated squamous cell carcinoma was suspected. On MRI imaging, a stage IIIB tumor (figure 1) was established. A multidisciplinary committee came to decision to carry out a QT-RT neoadjuvant treatment (mitomycin+capecitabine+RT) in 8 sessions: 36 Gy on primary tumor, 45 Gy on regional lymphatics, 50 Gy on inguinal adenopathy regions. After 20 days the patient presented in the emergency department for intense pain in the perianal region where perianal ulceration with destruction of skin, posterior vagina wall and involvement of lower border of both labia were diagnosed. Severe sphacelus and necrotic regions were observed.

Considering patient’s condition, an emergency surgical intervention was decided, a wound dressings with Betadine, diluted oxygenated water and Furacin (local antibiotic) were performed. Given that a possible recurrence of anal squamous cell carcinoma was suspected, a PET-CT was carried out showing a significant but heterogeneous glycidic metabolism increase (SUVm: 9.7 g/mL) that could be compatible either with the presence of a local neoplastic lesion or an inflammatory changes (Figure 2). After a non-conclusive biopsy, the multidisciplinary tumor committee established an indication to the surgical intervention offering abdominoperineal amputation.

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Figure 1: Pelvic MRI showing stage III anal tumor with suspected adenopathy (arrow).

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Figure 2: PET-CT of the anal region shows a thickening with significant glycidic metabolism increase (SUVm: 9.7 g/mL)

During the surgery, a large perineal radial ulcer with destruction of sphincters, perianal tissues and involvement of the lower third of the vagina was found (Figure 3).

A cylindrical abdominoperineal amputation was performed with perineal reconstruction (an omental flap was translocated to the pelvis, fixed to the peritoneum, and a synthetic mesh was placed) and a V-Y advancement flap was created. (Figure 4). A left terminal colostomy was done for fecal diversion.

Post-operative period was unremarkable with satisfactory evolution of abdominal and pelvic incisional wounds (Figure 5).

The pathological diagnosis showed absence of residual neoplasia. Ulceration and granulation tissue were found to be associated with histological changes attributable to radiotherapy (fibrosis, fibroblastic proliferation). In the lymph node group 9, the reactive changes were established. A complete tumor regression was confirmed (grade 0). Final pathology staging was pT0y, pN0y pM xy. Currently, after 20 months of follow-up, the patient is in a good general condition with no signs of tumor recurrence, and has an optimal quality of life.

Discussion

Anal cancer is a rare tumor with an incidence that has increased within the last 25 years. Multiple risk factors of the above conditions have been identified, including infection with human papilloma virus (HPV), anal intercourses, cigarette smoking, immunosuppression, and HIV infection [2].

The treatment of anal cancer before the 1970s consisted of abdominoperineal resection, but the current standard of care includes concurrent chemoradiotherapy (RCT) while surgery is reserved for patients with residual disease [3]. We presented a case of anal cancer that was repeatedly treated with RCT after recurrence development.
Figure 5: Result of perineal reconstruction 3 months after the intervention.

The above treatment despite its high efficacy can be associated with serious acute and chronic side effects. Acute effects include diarrhea, mucositis, erythema and skin desquamation, as well as myelosuppression. Late complications, some of which require surgical intervention with or without colostomy, include ulcers, anal stenosis, fistulas, and necrosis. The negative event rate following chemoradiotherapy for anal cancer ranges from 3% to 16% [4]. The risk of these complications increases with the radiation dose and the fraction of the total dose, with more frequent complications observed if fractions >2.5 Gy [4] are used.

Anal necrosis is a rare complication of RCT with few cases reported in the literature [5,6]. All cases presented describe the necrosis of the rectum. Rectal necrosis is usually treated with corticosteroid enemas and proximal temporal intestinal deviation with or without resection [2]. Surgical treatment is reserved for situations of complete destruction of the perianal region with sphincter involvement and a loss of continence [4], while abdominoperineal amputation is considered as the last alternative in the most complex cases. In our case, this option was also regarded given the suspicion of recurrence of the squamous cell carcinoma.

In conclusion, with the advancement of pelvic radiotherapy techniques, the incidence of local complications is expected to be reduced. Thus, the appropriate prevention seems to be the best form of treatment of the pelvic actinic lesions.

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