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clinical practice

A clinical case of perineal invasion from rectal carcinoma

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SUMMARY: **A clinical case of perineal invasion from rectal carcinoma.**

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We report a case of 62-year old women with skin infiltration in the perineal area after anterior rectal resection due to upper rectal cancer. Computed Tomography (CT) shows an intense infiltrative aspect of the lesion. The patient had a diffuse perineal infiltration predominantly at Levator Ani muscles and adhesions to the posterior parts of urinary bladder, uterus, vagina and perineal skin. The patient underwent surgery with colostomy to relieve the colonic tract due to obstruction and later was treated with chemo-radiation.

KEY WORDS: Rectum - Carcinoma - Skin metastasis.

Introduction

Colorectal cancer most often metastasized to the liver and lung and are rarely to the skin (1, 2). The most common malignancies reported to metastasize to the skin, both in men and women, are lung and breast cancers (3). The incidence of skin involvement is reported as low as 2.3% (4). Cutaneous metastases from colorectal cancer are generally caused by direct tumor extension, dissemination, invasion of the embryonic ligaments, or implantation during surgical resection (5). Some authors, such as Kaufman et al. (6) have suggested two hypotheses for this metastatic involvement: the first one implies a lymphatic and hematogenous spread of disease, while the second one speculates about an implantation during surgery. Usually, for almost all cancers, skin involvement is synonymous with extensive disease and frequently implies a poor prognosis (7, 8). Patients with perianal skin invasion by rectal cancer present with symptoms of severe pain, continuous bleeding and distressing discharge, which significantly affect their quality of life. The indication for radical resection is controversial, as the survival benefits and surgical outcomes have not been clearly determined (9-11). In this study, we report a rare case after Anterior Rectal Resection with perineal skin involvement.

Case presentation

The 62-year old woman patient underwent an Anterior Rectal Resection in 2009, due to upper rectal cancer. CT of chest-abdomen did not show any distant metastases, so she was not treated further. The patient remains asymptomatic until November 2015. By that time she complained of general fatigue, anal discharge, anal bleeding, abdominal distension, anemia and weight loss and was admitted to our clinic. The patient had a sizeable tumor, visible at the anus and perineal skin. The lesion represented an intensive local growth. Chest - Abdominal CT excluded lung, liver, or other distant metastases, but revealed a perineal expansion with significant Levator Ani infiltration and adhesions to the posterior parts of urinary bladder, uterus, vagina and perineal skin (Figures 1, 2, 3). A left colostomy was performed due to the perianal obstruction that relieved the colonic tract. The postoperative recovery period was satisfactory without se-

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Figure 1 - Anteriorly seen infiltration of uterus, vagina and adhered urinary bladder. Posteriorly seen infiltration of sacrococcygeal juncture.

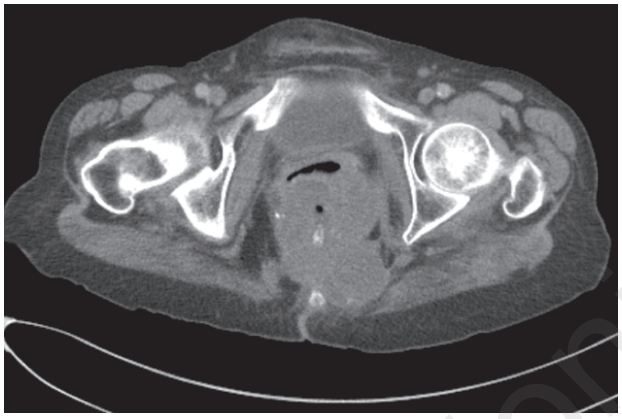

Figure 2 - Perineal infiltration predominant on muscular structures, including mainly m. levator and coccygeal infiltration.

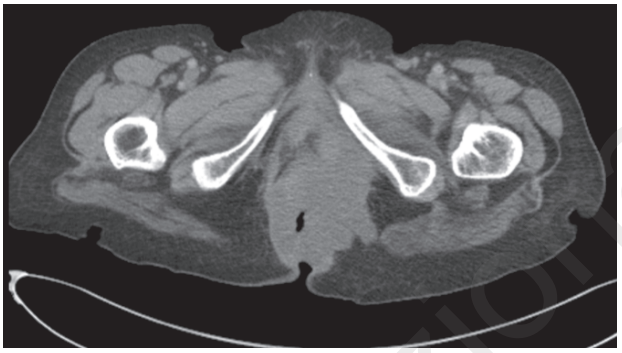

Figure 3 - Inferior part of perineal infiltration; cutaneous invasion is evident.

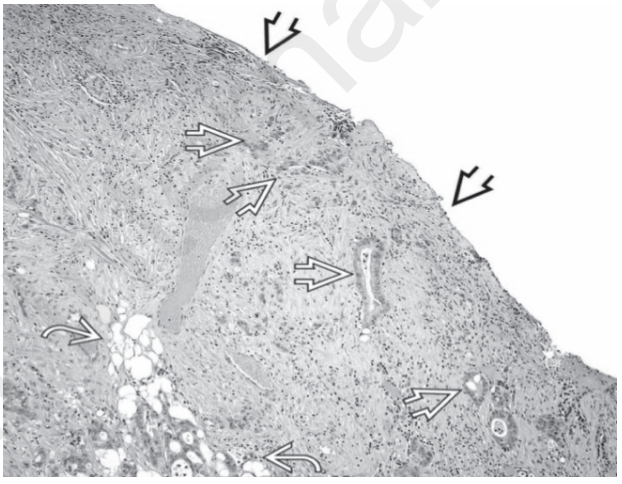

Figure 4 - Invasive rectal adenocarcinoma. The neoplastic glands (white open arrows) invade the perirectal fat (white curved arrows) and extend to involve the serosal surface (black open arrows).

vere complications. After operation, the patient received 6 cycles of chemotherapy with mFOLFOX6 and radiotherapy (40Gy). The histolopathological examination of the tumor revealed an invasive rectal adenocarcinoma with numerous neoplastic glands that invaded perirectal fat and and futher more involved the serosal surface (Figure 4).

Discussion

Colorectal cancer is one of the most frequent malignancies, but our clinical history includes an atypical pattern of colon cancer metastasis.

Skin metastasis of cancer is rare, occurring in 0.7-5% of cancer patients (8-12). Breast cancer is the most common primary cancer with cutaneous metastasis, with an incidence of 24% according to a meta-analysis by Krathen et al. (13). Lung cancer, colorectal cancer, renal cancer, ovarian cancer and bladder cancer all have similar rates of cutaneous metastasis ranging between 3.4-4.0% (14). Cutaneous metastasis may occur through lymphogenous spread, intravascular dissemination, direct extension of tumor and surgical implantation (14). Wong et al. added the spread along embryonal remnants such as the urachus to the aforementioned mechanisms (15).

Identification of skin metastasis from an internal malignancy is considered a poor prognostic sign, as it reflects widespread disease (4, 16). Survival after diagnosis of cutaneous metastasis ranges from 1 to 34 months. The study by Schoenlaub et al. reviewed 200 cases of cancers with cutaneous or subcutaneous metastasis and reported that among these, patients with colorectal cancer had a median survival of 4.4 months (3). On the other hand, a retrospective study by Lookingbill et al. showed a median survival of 18 months in patients with the same characteristics (4).

Kitahara et al. (17) performed in three cases of rectal cancer with perineal invasion, a total pelvic exenteration (TPE) with extended resection of adjacent organs, including the perineal skin followed by reconstruction,

using a vertical rectus abdominis myocutaneous (VRAM) flap.

No clear guidelines exist for an optimum chemotherapeutic regimen. Established chemotherapy treatments include 5-fluorouracil, capecitabine, irinotecan, oxaliplatin and cisplatin. Combinations of irinotecan to bolus 5-FU, oxaliplatin to infusional 5FU and leucovorin (LV) (FOLFOX) or infusional 5FU/LV with irinotecan (FOLFIRI) has increased survival to over 20 months. Treating patients sequentially with FOLFIRI followed by FOLFOX, or with FOLFOX followed by FOLFIRI, has increased the median survival times to 21.5 months and 20.6 months respectively (18).

There are currently no reports on the appropriate treatment for such significantly advanced local rectal cancer. A finding of isolated subcutaneous metastases of colorectal cancer without other metastatic sites is extremely rare and may delay the diagnosis by several months (19).

Conclusion

In conclusion, for rectal cancer patients with massive invasion to the perineum, multimodal treatment, including extended radical surgery, can be an effective treatment of choice. Despite this, there are currently no data on the effectiveness of various treatment modalities for this type of cancer, as there are simply too few cases to make definitive conclusions. An extensive study should be conducted to determine the prognostic factors for long-term survival.

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