Case Report

Transitional-Cloacogenic Carcinoma of the Perianal Region

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Key Words
Transitional-cloacogenic carcinoma

Transitional-cloacogenic carcinoma is a rare form of neoplasm, which occurs in the anorectal area. We report a case of this tumor located in the perianal region, treated by means of local surgical excision. Clinical and therapeutic features of this rare tumor are discussed.

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Case Report

A 37 year-old man was admitted to the Department of Colorectal Surgery at Kaohsiung Veterans General Hospital due to an enlarged mass over the perineum, which has caused the patient discomfort for 1 year. He denied any systemic diseases, and no contributory family or personal history was noted. Routine digital rectal examination revealed no specific findings. A hard, fixed mass measuring $7.0 \times 5.0$ cm, was located in the left perianal region, with features resembling those of smooth-contoured soft tissue lesions (Fig. 1). Complete laboratory workup showed normal values for all results. The patient then underwent sonography and pelvic computed tomography (CT) scan, which showed a $5.0 \times 3.0$ cm irregular lobulated heterogenous mass, $5.0 \times 3.0$ cm, in the subcutaneous region of the left perianal region. Color imaging showed hypervascularity within the lesion, raising the suspicion of a sarcoma-group tumor (Fig. 2A & 2B). Surgical intervention was requested, and tumor excision was performed by the perineal approach in the lithotomy position. At time of surgery, the tumor was found to be moderately adhered to the levator ani muscle, and was completely excised with the margin free of residual tumor.

Upon postoperative pathological examination, the excised specimen was discovered to be circumscribed but not encapsulated. It measured $6.0 \times 3.5 \times 2.5$ cm, with a gray-white appearance, and was adjacent to the penile muscle. Some old blood clots were found inside the specimen (Fig. 3).

Microscopically, the specimen was revealed to be a high-grade carcinoma composed of solid sheets of atypical tumor cells with focal papillary formations reminiscent of urothelial carcinoma. It is in this way that transitional-cloacogenic carcinoma can be differentiated from other small cell neoplasms that affect the area (Fig. 4).

After his operation for transitional-cloacogenic carcinoma of the perineum, the patient underwent several subsequent examinations, including urine cytology, Tc-99m MDP (methylenediphosphonate) bone scan with whole body image and spot views, and pelvic
magnetic resonance imaging (MRI). None of the results revealed any further abnormalities. The patient remains free of disease 1 year after the surgery, and has regularly been followed up at our outpatient department.

**Discussion**

In 1956, Grinvalsky and Helwig published a study\(^1\) of the anatomy of the anal canal, in which they detailed the features of the transitional or “cloacogenic” zone, which is a vestigial remnant of the cloacal membrane. This region corresponds to the columnae anales and anal glands. The epithelial lining of the anal glands and of the cloacogenic zone is of the transitional variety.\(^2\) Tumors in this region account for 2-3% of all anorectal carcinomas, and occurs more than twice as often in women.\(^7\) An extra-visceral location of a transitional-cloacogenic carcinoma is exceedingly rare, but the lesion may still be situated on the perianal skin.\(^3\) Transitional-cloacogenic carcinoma may resemble carcinomas of urothelium to a certain extent, which are composed of islands or nests of cells that have indistinct borders and oval nuclei (Fig. 4).

Wide surgical excision is the preferred treatment, and to date no conclusions have been reached with regard to the radiosensitivity of cloacogenic carcinomas.\(^2\) The prognosis of cloacogenic carcinoma is dependent upon early diagnosis and radical treatment. However, when the carcinoma involves the regional lymph nodes, or there is evidence of an anaplastic pattern histologically, a poorer prognosis can be expected.\(^8\) It is important to perform a biopsy and a thorough endoscopic examination of all ano-perianal lesions to separate those of dermatological relevance from those of surgical relevance, and at the same time to determine the exact histological type of the latter group so as to select the correct therapeutic approach.\(^3\) Although cloacal cells are originally present in the rectal wall, the possibility of secondary rectal involvement by a persistent cloacal remnant from the levator ani muscle can not be excluded.\(^6\) Inguinal node dissection is indicated if the nodes appear clinically involved, and when the lesion arises from the anal canal, classical treatment has been abdominoperineal resection.\(^4\) Five-year survival rate can attain approximately 50% following resection without chemoradiation.\(^5\)

In conclusion, transitional-cloacogenic carcinoma is a rare tumor of the anorectal region originating from a persistent remnant of the cloacal membrane of the embryo. Complete preoperative survey is required to determine the best therapeutic strategy for the patient.

**References**
