Secondary Penile Carcinoma Originated from Pancreas

Secondary penile cancers are rarely seen and most of them are originated from genitourinary and gastrointestinal tract. But metastatic penile cancer originated from pancreas are extremely rare and two cases have been reported in the literature, only one of them was pathologically proven in autopsy. We report a case of secondary penile carcinoma originated from the pancreas as the primary site which was pathologically proven. *(JKMS 1997; 12 : 67~9)*

Key Words : *Secondary cancer, Penis, Pancreas*

Tai Young Ahn, Eun Ho Choi and Kun Suk Kim

Department of Urology, College of Medicine University of Ulsan, Asan Medical Center, Seoul, Korea

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Address for correspondence
Tai Young Ahn, MD, Department of Urology, Asan Medical Center, 388-1 Poongnap-Dong, Songpa-Ku, Seoul, 138-040, Korea
Tel : 02-224-3732, Fax : 02-477-8928

INTRODUCTION

Secondary penile carcinoma is rare and less than 300 cases have been reported in the literature (1). Most of these tumors are originated from intrapelvic organs, and occasionally from extrapelvic organs. Only two cases of secondary penile carcinoma with primary tumor in the pancreas were reported (2, 3). We present a case of metastatic penile cancer whose primary site was confirmed to be the pancreas by pathologic specimens.

CASE REPORT

A 60-year old man had suffered from perineal discomfort and penile pain during erection for 4 months and he received symptomatic treatment at local clinics. At that time painful hard nodules were found in penile shaft and their size were not reduced although pain was improved with antibiotic treatment. He had no previous history of malignancy. Physical examination revealed a non-tender hard diffuse lesion along the coronal sulcus

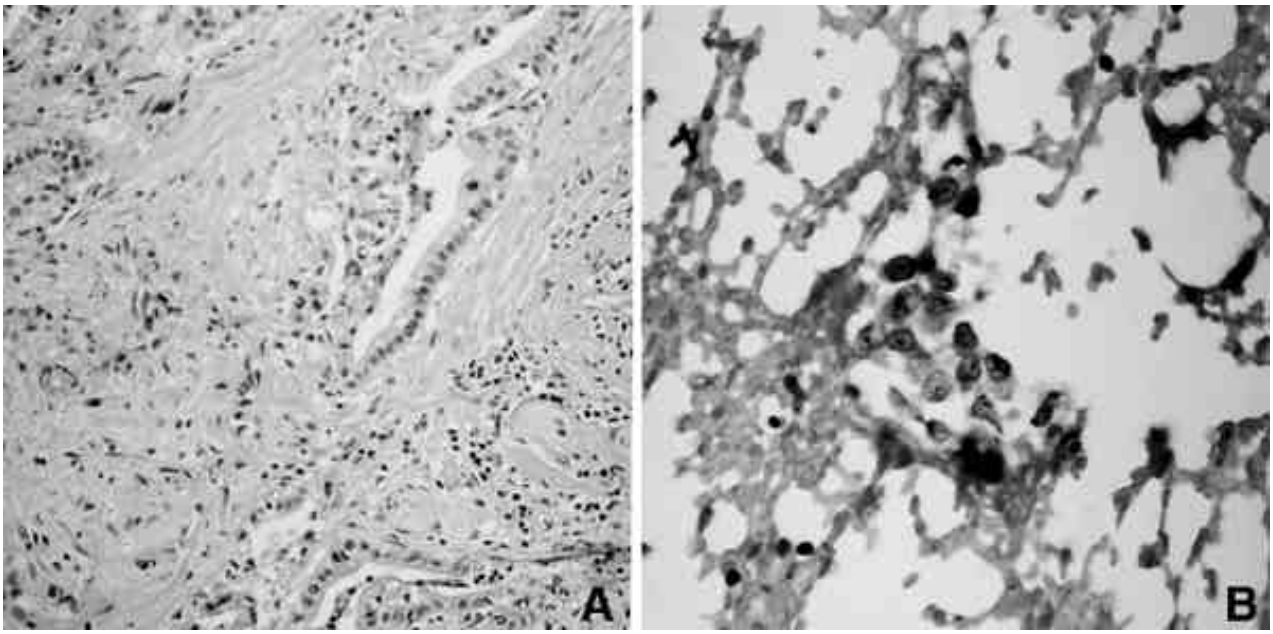

Fig. 1. A. Penile biopsy demonstrates metastatic adenocarcinoma (HE, ×200). B. Aspiration cytologic study for pancreas demonstrates the same histologic findings as metastatic penile carcinoma (HE, ×450).

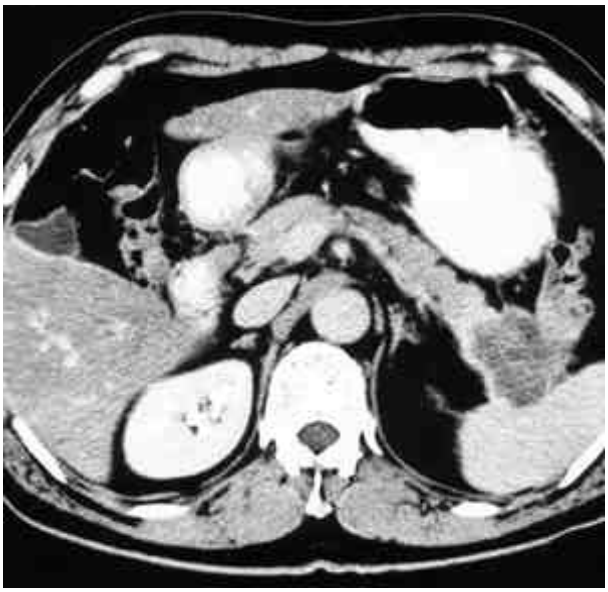

Fig. 2. Abdominal computerized tomography shows a low-density area in the pancreatic tail.

and both corpus cavernosal bodies. Routine laboratory studies showed no abnormal findings except elevated serum lipase level on blood chemistry. Penile ultrasonography demonstrated a thickened plaque with posterior shadowing along the tunica albuginea. Our initial clinical impression was Peyronie's disease and excision of the plaque with dermal graft was planned. Operative finding was different from our clinical impression. The whole bilateral corpus cavernosal tissues including the tunica albuginea was replaced with hard indurated mass and small nodular mass was present on coronal sulcus. Complete excision was impossible and excisional biopsy of the mass on the coronal sulcus and corpus cavernosal tissue was done. Pathologic finding showed moderately differentiated adenocarcinoma suggesting metastatic carcinoma (Fig. 1, A). To find the primary site of penile cancer, tumor marker and imaging studies were carried out. Serum prostate-specific antigen (PSA) and carcinoembryonic antigen (CEA) level were normal but serum carbohydrate antigen 19-9 (CA 19-9) level was markedly elevated (174 U/ml, normal value<37 U/ml). The abdominopelvic computerized tomography demonstrated a low density area with cystic change in the tail of the pancreas (Fig. 2). CT guided needle aspiration of the suspicious pancreatic lesion revealed a moderately differentiated adenocarcinoma which had the same histologic features with the penile lesion (Fig. 1,B). These findings indicated that pancreatic cancer metastasized to the penis. We recommended radiation therapy but the patient refused any further treatments and died of disseminated abdominal metastatic disease four months later.

DISCUSSION

Metastatic cancer to the penis is rare and less than 300 cases have been reported in the world (1). It is not easy to explain the relatively low incidence of metastatic penile cancer because the penis has extensive vascular interconnection with adjacent pelvic organs. This low incidence may be partly due to the dynamic penile blood stream by erection which make the implantation of tumor cells difficult (2) and partly due to the underdetection of metastatic penile cancer mimicking some benign conditions as shown in our case. Moreover the penis may not be routinely examined as closely as other organ systems (1, 4).

The primary sites of metastatic penile cancer are genitourinary (70%), gastrointestinal (22%), respiratory organ and so forth (1, 4). The bladder and prostate are the most common primary organs followed by rectosigmoid and kidney. Other unusual primaries of it include the pancreas, liver, nasopharynx, malignant melanoma, bone and Burkett's lymphoma. Our case seems to be the third case of metastatic penile cancer from the pancreas reported in the literature. Weitzner (3) reported one case of squamous cell carcinoma of the pancreas with multiple organ metastasis in autopsy findings and Hashimoto et al.(2) reported the other case of pancreatic cancer with metastasis to the liver, prostate and penis which was defined by immunoperoxidase tissue staining of CA 19-9 and CEA without histologic diagnosis of the pancreas and liver.

To explain the mechanism of metastasis to the penis, many theories have been proposed. Retrograde venous metastasis to the penis is suggested to be the most common pathway. And direct spreading from adjacent organs, retrograde lymphatic spread, direct spread through the arteries and implantation of tumor cells transported by the urine are considered to play a minor role (5, 6). The most common symptoms of metastatic tumor to the penis are penile induration and diffuse or localized swelling and priapism in 38% of the patients (5, 7). Hematuria, symptoms of urinary obstuction and perineal discomfort are frequently reported as nonspecific symptoms (6, 8). Pain is not a typical symptom but perineal discomfort on sitting position is frequently reported as shown in our case. Radiologic studies, serum tumor marker analysis, and immunoperoxidase tissue staining of CA 19-9, CEA and PSA were useful to investigate the primary site of metastatic penile cancer (2, 9). Serum marker analysis, radiologic and histologic findings revealed the pancreas to be the origin of metastatic penile cancer in our case.

Treatment depends on the several factors such as general condition of the patient, status of the primary

tumor and the extent of the metastasis. The modalities of treatment consist of local excision of the tumor, radiation therapy, chemotherapy and partial or total amputation of the penis, but the treatment is almost always palliative (5, 7, 10). Radiation therapy and limited surgical excision are the most usual treatment modalities. When urinary tract obstruction is present, procedures designed to alleviate the condition may be useful (11). Curative surgery was done in limited cases such as colorectal cancer with focal metastsis to penis only (12). The prognosis is extremely poor regardless of primary site, histologic type and modality of treatment. Although long term survivors with rectal primaries have been reported in rare cases (12), most patients died between two and six months after diagnosis as shown in our case.

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