

## CARCINOMA ARISING IN THE SINUS TRACT WITH METASTASES

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### = Abstract =

Malignant degeneration of chronic sinus tracts is rare and serious complications. Thorough treatment of benign inflammatory sinus tracts is essential to prevent such complications. The author is adding on case to the 28 reported carcinoma arising in sinus tracts with metastases.

Prophylactic treatment of regional node area appears to be indicated for the selected cases.

Development of malignant disease in chronic sinuses and fistulas has been reported by many authors.<sup>1)-18)</sup> Even though the exact mechanism of malignant degeneration in a long standing sinus and fistulous tract is not known, the importance of chronic irritation as an etiologic factor has been well recognized. Reported incidence of malignant degeneration reveals from 0.23 to 1.6% in osteomyelitic sinus, 0.1% in anal fistula and 0.7% in sinus from chronic empyema.<sup>11), 12)</sup> Arons et al<sup>1)</sup> reviewed 56 cases of scar tissue carcinoma and stated that carcinoma arising in chronic fistula and sinus is probably the most rare type of scar tissue carcinoma. In 1948 expressing the time factor of development of carcinoma in perineal fistulas, Skir<sup>16)</sup> arbitrarily set ten years for sufficient time to eliminate any doubtful cases. A rather extensive review of literature reveals indeed that most of reported cases had long standing fistula or sinus before malignant degeneration. Lovell et al<sup>11)</sup>, in reviewing their cases of cancer

in osteomyelitic sinuses, noted that the carcinoma is always of the epidermoid variety and that the prognosis is favorable because the disease is slow growing and usually there is no metastasis. However, Bowers<sup>5)</sup> stated that some 64 cases of anorectal carcinoma occurring in fistulae had been reported by 1953 and most of these are mucin producing adenocarcinomas and only few squamous carcinomas. Metastases from carcinoma arising in sinus and fistulous tracts are rare and only 28 cases have been reported. In 1941, Beston and Ney<sup>3)</sup> reviewed seven cases from literature and added two cases of their own. Thereafter, two cases by McAnally(1949)<sup>12)</sup>, five cases by Ellis & Lee(1951)<sup>8)</sup>, two cases by Khne et al(1964)<sup>9)</sup> and one case by Bretlau(1967)<sup>6)</sup> have been reported. In a report of two cases of carcinoma developing in pilonidal sinus with metastases, Puckett and Silver(1973)<sup>14)</sup> found four additional cases of carcinoma arising in pilonidal sinus with metastases in literature.

## CASE REPORT

A 57 year old white male was transferred from other hospital on March 27, 1979 with a draining sinus at perineum and a single right peripheral lung mass on chest x-ray for possible radiotherapy. On September 14, 1973 he was diagnosed to have papillary transitional cell carcinoma of urinary bladder, grade II and subsequently had transurethral resection of the tumor. Since then the patient underwent several times of repeated transurethral resection of recurrent tumor until January 29, 1975 when a total cystectomy with ileal conduit was performed. Two years later on July 12, 1977 the patient was diagnosed to have recurrent tumor in penile urethra and the penis was amputated for this reason. On December 12, 1978, he underwent excision of perineal sinus which was presented for about four months. Pathologic examination of surgical specimen revealed "poorly differentiated carcinoma in islands and in the sinus tracts most likely origin could be from transitional epithelium showing squamoid changes." On examination at our hospital there was a sinus draining foul smelling discharges at perineum between scrotum and anus. The penis was not present due to previous surgery and rectal examination was within normal. There were no lymphadenopathy at both inguinal and other areas. Biopsy of sinus tract was done on April 5, 1979 and reported as "well differentiated squamous cell carcinoma." Chest x-ray showed a single mass at the peripheral region of right upper lung. Bone scan revealed increased uptake at the level of thoracic vertebrae compatible with metastatic involvement. Biopsies of bone and lung lesion were not done. Radiotherapy was given to the perineum with 5000 rads in 25 treatments and to the lung lesion with 3000 rads in 10 treatments using Cobalt 60 teletherapy machine. Middle of May, 1979, the patient was transferred back to referring hospital with recommendation of regular follow up there. Three months later in mid

August, 1979, the patient was transferred to our hospital again with a right inguinal mass and pain on spine. On physical examination there was a 6 x 7 cm firm partially fixed mass at right inguinal region and tenderness over upper thoracic spine. The perineal sinus was clean. Biopsy of right inguinal mass revealed "metastatic squamous cell carcinoma in subcutaneous tissue." However, biopsy of perineal sinus reported as "no tumor." The patient was given radiation therapy to the cervico-thoracic spine with 3000 rads in 10 treatments and to the right inguinal mass with 3900 rads in 13 treatments. The pain was completely relieved and the inguinal mass was shrunken to the size of 3.5x3.5 cm. The patient was transferred back to referring hospital one month after completion of second course of radiation therapy.

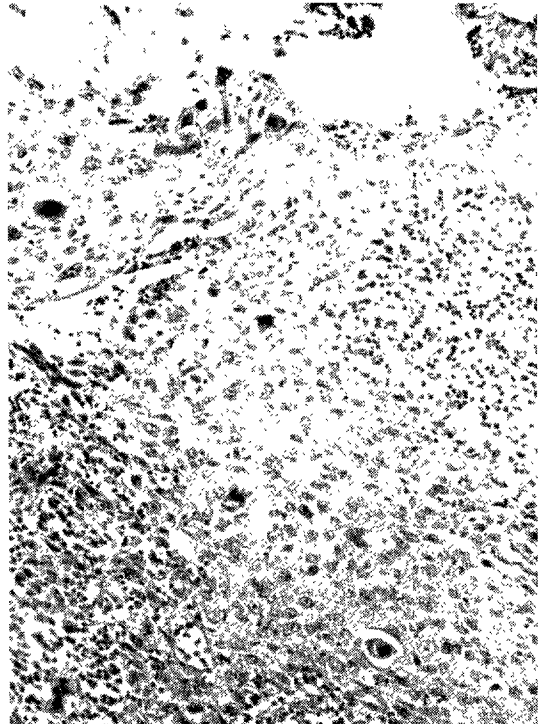
## COMMENT

The development of carcinoma in chronic sinus and fistula is rare and serious complication. Thorough and appropriate therapy of benign inflammatory sinuses is essential not only to treat primary disease but as a preventive measure of the common development of carcinoma. Malignant degeneration should be suspected whenever a growth appears in the sinus and discharge becomes foul or hemorrhagic<sup>12)</sup>.

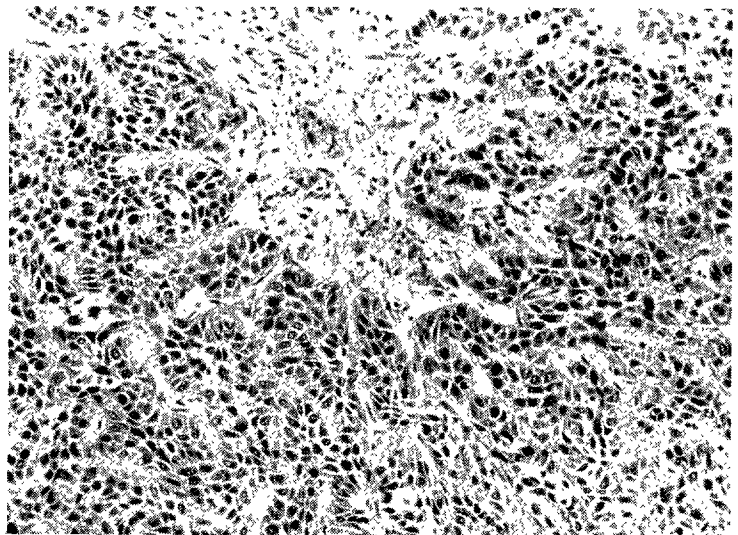
The present case has two different features from reported cases. First, the duration of the sinus prior to malignant change is .8 months which is much shorter than reported cases. Review of literature and our case suggest that careful attention should be paid to the possibility of spread to the lymph node from the sinus tract cancer and prophylactic treatment of the regional node area appears to be indicated for the selected cases<sup>9), 12)</sup>.



**Fig. 1.** The original tumor, a papillary transitional cell carcinoma in the urinary bladder. (H&E, x160)



**Fig. 2.** The surface of the sinus tract carcinoma exhibiting dyskeratotic malignant squamous cells. Acute and chronic inflammatory cells are intimately admixed. (H&E, x200)



**Fig. 3.** Representative micrograph of the metastatic squamous cell carcinoma in the inguinal subcutaneous tissue. (H&E, x200)

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