Intracranial Metastasis of Sweat Gland Carcinoma
Case Report

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The clinical entity of sweat gland carcinoma has been adequately described.2-4 We are reporting the only case of this interesting neoplasm in which a blood-borne metastasis was discovered in the brain.

Case Report

A 37-year-old man had first noted a small indurated area on the volar aspect of the left ring finger in 1943. At the time of his induction into the Army in 1946, no comment was made concerning this lesion. In 1947, while the patient was stationed in Germany, the finger was injured and subsequently became erythematous and painful. Local excision was performed that same year, but the lesion recurred requiring re-excision 10 months later. In both instances the pathological report was "sweat gland adenoma." There was no evidence of lymphadenopathy or distant spread at that time.

The patient was discharged from the Army and remained asymptomatic until 1951, although the lesion recurred and slowly increased in size. Local excision was again attempted revealing recurrent sweat gland adenoma. A lesion 1 cm. in diameter with similar pathological features was also excised from the anterior deltoid region. In August, 1953, this man was admitted to the Albany Veterans Administration Hospital. Examination revealed a scarred, indurated area on the volar aspect of the 3 phalanges of the left ring finger (Fig. 1). Previous clinical records were not available so that the true nature of the lesion was not fully appreciated by the attending physician. Five small subcutaneous nodules were observed on the right shoulder and trunk. X-ray of the finger showed bony destruction of the proximal phalynx, yet the chest film and skeletal survey were normal.

Operation. A preoperative diagnosis of neurofibroma was made and the finger was amputated. The pathological sections showed "sweat gland adenoma with evidence of local invasion." This prompted biopsy of 2 of the shoulder nodules which were also sweat gland adenomata. Further therapy was impossible as the patient failed to appear for follow-up evaluation.

It was not until March, 1965, that he was seen again. During the intervening 12 years he had remained well until December, 1964, when he had noted the insidious onset of bifrontal headaches and progressive visual blurring. Examination revealed 4 subcutaneous lesions, 2 cm. in diameter, over the right shoulder, chest, abdomen, and left thigh. No significant lymphadenopathy or visceromegaly was found. The patient was lethargic. There were two dipoles of papilledema and bilateral retinal flame hemorrhages, a right homonomous heminopsia, and a mild right hemiparesis. X-rays of the skull were normal, but a chest film (Fig. 2) revealed a 5-cm. lesion at the base of each lung in addition to smaller metastases in the more superior segments of the right lung. There were no malignant cells in the sputum. An electroencephalogram showed left temporo-parietal theta slowing. A RISA brain scan and carotid angiogram showed a solitary brain lesion in the left occipital region (Fig. 3).

Operation. A left parieto-occipital craniotomy was performed and a cystic tumor measuring 5×7×3 cm. was excised. Biopsies were made of 2 subcutaneous nodules. In each instance the diagnosis was sweat gland carcinoma (Fig. 4).

Postoperative Course. The consensus was that no specific chemotherapy, x-ray therapy, or further intervention was indicated until the pulmonary pneumonic lesions became symptomatic.

The patient did reasonably well for approximately 4 months but was readmitted to the Albany Veterans Administration Hospital in August, 1965, 5 months after craniotomy. The papilledema and headache were now worse. Repeat carotid angiograms failed to show a

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frank tumor stain, but did reveal evidence of a mass lesion in the left parieto-occipital region just anterior to the site of the previous metastasis. At re-exploration, tumor was removed from the posterior parietal region. The patient had a relatively uncomplicated course and the only fixed neurological deficit is a right homonymous hemianopsia. In January, 1966, he complained of painless hematuria related to demonstrable metastatic lesions in both kidneys. At present he is convalescing at home and is able to do household tasks and work 3 days a week.

Discussion

Sweat gland carcinoma was clearly characterized in 1943 when Gates et al. reviewed the previously reported cases and summarized the pathologic details. Their work was reviewed and further expanded by Stout and Cooley in 1951. Jacobson and his associates collected 32 cases of metastatic sweat gland carcinoma and added one of their own in 1959. Recently Tulenko and Conway reviewed 109 sweat gland tumors from their institution of which 12 were carcinoma. There was no mention of metastasis, it being their impression that "most sweat gland carcinomas exhibit only cellular anaplasia or local invasion similar to basal cell carcinomas and are treated satisfactorily by adequate local excision."  

In the reported cases, the lesions have been documented as arising from areas of the body where there is a large concentration of eccrine or apocrine glands. These include scalp, axilla, arm, pelvic area, face and neck and leg. Metastasis was found to start in regional lymph nodes, but later hematogenous spread was noted in over 50% of the cases.