SQUAMOUS-CELL EPITHELIOMA OF THE LEFT FOURTH FINGER

A Case Report

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Primary carcinoma of the fingers not superimposed upon a previous x-ray, radium, or chemical burn is a rare condition, only twenty-two cases being recorded in medical literature. In the Radiation Therapy Department of Bellevue Hospital, where the great majority of cases treated are malignant tumors, only two instances of carcinoma of the finger have been observed among 11,400 cases seen since 1925. The first of these was reported by Rubenfeld in 1932, and at the time of his report represented an incidence of one in 6,400 cases. Five thousand additional cases were seen before the second case, reported in this paper, was encountered.

In fifteen of the twenty-two cases reported there was a history of chronic irritation or of a pre-existing non-malignant lesion which may have been a locus minorae resistentiae for the irritations commonly encountered by the fingers. In seven cases no history of irritation was disclosed. It cannot be denied that the daily irritation encountered by the fingers is great and that the number of primary carcinomata on these parts is small, yet in those malignant neoplasms which do occur the factor of chronic irritation seems to play an important rôle.

Velpeau in 1850 described a cancer occurring under the nail of the index finger, which was preceded by infection of the nail bed. In Seeley's case there was a history of an extensive burn fifty years prior to examination. One year passed before the burn healed completely, and after that time the site frequently became fissured and painful. Gross described two cases of epithelial-cell carcinoma of the finger, in both of which a history of chronic irritation was obtained. One patient had a sliver in the finger for twenty-four years; a tumor developed at the site, became ulcerated, and was resected. In the second patient the tumor was at the site of a knife wound received six years previous to treatment. The youngest patient on record, described by Chavasse, was a twenty-two-year-old soldier who had been treated for a year for a chronic ulcerative dermatitis of the fingers. Parmentier's patient was a woman who had handled fish for many years. She had six tumors of the hand, all of which proved, on microscopic examination, to be squamous-cell epitheliomata. In Stahr's case, a carcinoma of the thumb in a cobbler, there was a history of frequent injuries with the awl, while in Ullmann's case, involving the ring finger, there had been continuous irritation by a ring. Réchou and his associates record the case of a sixty-six-year-old man who gave a history of infection of the finger following a slight injury two months prior.
to his admission to their clinic. Silverman reported an epithelioma following a chronic paronychia. Prossen White refers to a case in a man who hurt his thumb with a splinter of wood, and later developed cancer.

In four of the reported cases—those of Homans, Franke, Rubenfeld, and De Bell and Stevenson—there was a history of a pre-existing wart or wart-like growth. In De Bell and Stevenson's case a squamous-cell carcinoma appeared at the base of the thumb following removal of the wart and frequent cauterization of the base. This patient also received x-ray, diathermy and Alpine light treatment previous to cauterization. In the case to be reported here a wart was present for about fourteen months before ulceration and proliferation began.

![Image of a hand with a wart](image)

**Fig. 1. Squamous-cell Epithelioma of the Finger in a Man of Seventy**

**Case Report**

M. M., a white male, seventy years old, entered the clinic on Nov. 19, 1936, with a "sore" on his left fourth finger. The family history was negative for carcinoma. The past history of the patient was not significant. Venereal infection was denied.

The patient had first noticed a small wart on the finger about fourteen months prior to admission. The wart frequently broke off, with slight bleeding, but soon recurred. There was no pain. Finally the lesion became ulcerated and began to grow more rapidly.

On examination, an ulcerated area about 2 cm. in diameter was seen at the dorsal base of the fourth left finger, encroaching on the web between the fourth and fifth fingers (Fig. 1). The edges of the ulcer were raised, indurated, and pearly gray in color. The crater was covered by an easily removable brown crust, which left a serosanguineous base.

In addition the patient had a crust-covered ulceration about 1.5 cm. in diameter on the inner canthus of the left eye. This ulceration was shallow, with slightly indurated edges and a serosanguineous base. The lesion was said to have been present for about four months. The regional lymph nodes were not enlarged.

A biopsy from the lesion on the hand was interpreted by Dr. Symmers as squamous-cell epithelioma (Fig. 2).

On Nov. 20, 1936, a wax mould of 0.5 cm. thickness was constructed and shaped about the finger. On it were placed four 5 mg. tubes of radium element filtered through 0.5 mm. platinum. An overlying lead shield protected the adjacent digits. The mould was allowed to remain in place for ninety-six hours to yield a total dose of 1920 mg. hours.

Following removal of the radium, healing occurred without complications. In February 1937 no evidence of residuum or recurrence was noticeable, and the site of the lesion was completely replaced by a normal scar.
Carcinoma of the finger is a rare occurrence. At Bellevue Hospital it has been noted only twice in 11,400 patients. Irritation is seemingly a causative factor.

In the case reported treatment with radium produced complete healing.

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