

CASE REPORTS

BASAL CELL CARCINOMA OCCURRING IN BURN SCARS

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IT IS WELL known that epidermoid carcinoma may occur in scars. It was known long before Marjolin¹ wrote his classical paper on the subject. It is perhaps less well known that basal cell carcinoma may occur under these circumstances. The following case, while unusual, will illustrate the necessity of dealing promptly with scars which appear active or are a source of complaint to the patient.

In 1949, R.S., a 45-year-old smelter worker, was burned on the anterior chest by some molten metal. This resulted in a triangular-shaped scar of about 1½" at its widest point. It was quiescent until 1954. At that time he complained of tenderness in one margin of the scar. He was seen by his physician, who noted some induration and a scaly surface at the site of



Fig. 1

tenderness. He was seen on several occasions over the next two years with some increase in the size of the scar. In 1956 the scar was widely excised and the defect closed with an intermediate split skin graft. The tissue examination (Figs. 1 and 2) revealed a typical basal cell carcinoma in the margin of the scar.

In 1957 the patient was burned on the forehead by the same material. The burn resulted in a small scar approximately ½" in diameter. He was seen six months after the original injury. At this time his complaint was that the scar "wasn't healing properly". On examination he was noted to have a reddened scar with a scaly surface. It was freely movable; there was no evidence of ulceration and no enlargement of the regional lymph glands. The abnormal tissue was widely excised and the defect closed. The pathological examination revealed a basal cell carcinoma of the scar (Figs. 3 and 4).



Fig. 2

DISCUSSION

Classically, basal cell carcinoma is a disease of the fifth and sixth decades, and in 95% of the cases the tumour occurs in the head and neck region.² The etiological factors are principally actinic and

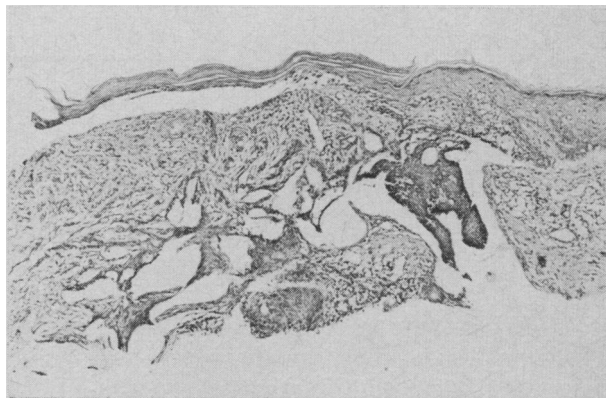


Fig. 3

ionizing radiation. Occasionally chemicals and petroleum products can produce this tumour. Mechanical injury is not considered to be an etiological factor. The tumour is commoner in younger people

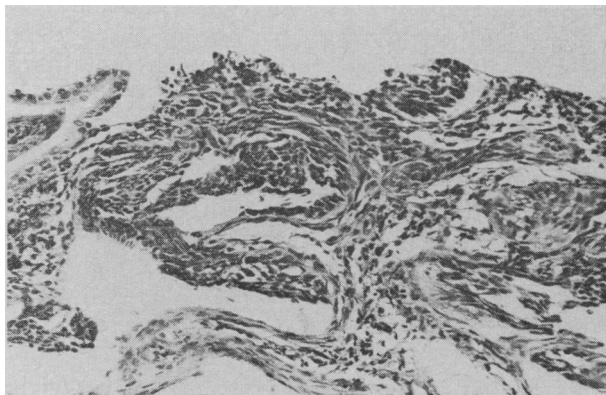


Fig. 4

than is generally realized and it is found in more people under 60 years of age than is epidermoid carcinoma.³ Basal cell carcinoma has no characteristic gross appearance, and in 37% of the cases there is a history of a presumably benign pre-existing lesion.⁴ These factors probably account for the long delay in establishing tissue diagnosis which is evident in the literature.⁵

The exact relationship of skin cancer to scars is not easy to establish. Of 60 tumours occurring on the leg, arm, scalp and trunk, 18% were in scars, whereas in other sites only 0.77% were in scars. In their series of 1374 cases of basal cell carcinoma, Treves and Pack⁷ found only seven instances in which the tumour was in burn scars. Murray and Cannon⁵ found six cases in their series of 42 patients where basal cell carcinoma occurred in scars, two of which were burn scars. Webster⁸ mentions a case in which the carcinoma developed in a burn scar after a superficial scratch. The author knows of two instances where basal cell carcinoma occurred in scars, one after thermal injury to the eyelid and the other after a dog bite on the dorsum of the hand.

The mechanism of carcinogenesis in these circumstances is not well understood. It is felt that

diminished blood supply and atrophy of the adnexa and epidermis may play a part. Possibly this renders the tissues more sensitive to the damaging effects of actinic radiation, since most of these tumours are associated with chronic solar dermatosis. The scars may show keratosis or fissuring before carcinoma develops. The presence of carcinoma may be indicated by an induration, an ulceration or a raised plaque.

SUMMARY

A case of basal cell carcinoma in burn scars is reported. A brief review of the literature is presented.

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PERINEAL RECONSTRUCTION AFTER VULVECTOMY*

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LEUKOPLAKIA VULVAE is well recognized as a pre-cancerous lesion. The disease affects mainly the older age group, but occasionally younger women are afflicted by the condition. The accepted treatment today is vulvectomy. Many excellent papers on this subject have appeared in the recent literature, but few of the authors discuss early or late postoperative morbidity associated with the procedure.

Collins *et al.*¹ state that in 11 of 41 cases of simple vulvectomy there was slight breakdown of the wound postoperatively. Six of 40 patients followed up required further minor procedures, consisting of excision of a painful scar or fold.

Green, Ulfelder and Meigs² state that split skin grafting, immediate or delayed, is occasionally used with radical vulvectomy, and that minor degrees of wound infection and marginal necrosis of skin flaps were encountered in nearly one-half of the 238 cases reviewed.

The following case is an example of the late morbidity associated with partial vulvectomy.

A married white female, aged 55, was admitted to St. Michael's Hospital in January 1959. She stated that in 1947 she had undergone partial vulvectomy for leukoplakia, and that in 1948 she had had further excision of leukoplakia vulvae with split skin grafting to the area. Since that time she had been well, except for symptoms related to the perineum.

She had had intermittent cracking and redness of the vulvar area, accompanied by a chronic anterior fissure-in-ano. Treatment at various times consisted of local ointments, saline baths and vinegar baths.

Sexual intercourse had been impossible for several years. Recently, the act of walking had caused a stretching of the perineal area, further aggravating her symptoms.

General physical examination was negative. Perineal examination showed no evidence of leukoplakia but there was marked scarring of the area. Abduction of the thighs was greatly limited. There were tight bands running transversely anterior and posterior to the introitus, and the anterior margin of the anus was fixed to the introitus by scar tissue. The urethral orifice and distal one-third of the urethra were intimately involved with scar tissue, the urethra being pulled anteriorly. The introitus admitted the tip of the small finger (Fig. 1a).

An operation was performed on February 8, 1960, under general anesthesia with nasotracheal intubation, the patient being placed in the lithotomy position. After skin preparation and draping, a vertical incision was made in the midline from the area of the clitoris to the urethra. The clitoral stump was dissected free from the surrounding scar, and transverse incisions

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