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Epidermoid Carcinoma Arising in an Epidermal Inclusion Cyst

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Mostly because of adequate early treatment, large epidermoid carcinomas are not frequently seen today. The case which we documented is unusual because of the huge size of the tumor and the resulting deformity. The photographs illustrate the pre-operative and post-operative appearance. The fact that these tumors can reach enormous size and become malignant bears repeating. Radical excision and skin grafting, we believe, resulted in a cure for this patient. Incidentally, there was a great change in her mental outlook after the removal of this tumor.

Large, disfiguring tumors are not as commonly seen today as they were even 50 years ago, since they are properly treated long before they reach such large dimensions as the case to be described here. Even though this patient had two previous attempts at removal elsewhere, the procedures were inadequate. Radical excision and skin grafting produced a satisfactory result.

Case Report

This 52-year-old white woman came to the Fourth Surgical Division, General Surgery, Henry Ford Hospital for treatment of a soft tissue tumor which occupied the greater portion of the dorsal surface of her neck and upper chest. When she first noted the swelling on the back of her neck 25 years earlier, it was considered to be an infected sebaceous cyst. After the usual conservative forms of treatment failed to resolve the problem, she was admitted to another hospital for surgical excision. Eight years later, she was readmitted to the same hospital for re-excision of the mass, which was described as "hard, rubbery, non-tender, lobulated and surrounded by normal appearing skin". Primary closure of the wound margins was accomplished. The wound continued to drain occasionally and some 'heaping up' of tissue near the middle of the surgical scar began to develop.

During the year preceding her arrival at our clinic, the mass increased tremendously in size, she noted occasional suppuration and a foul smelling discharge. She became reluctant to accept social invitations because of the unsightly mass on her neck. Her clothes no longer fit properly and she wore her hair in an unattractive style to camouflage the mass. Also, she had developed a somewhat withdrawn personality behavior. A persistent fear that the mass harbored malignancy finally drove her to seek further surgical attention.

Physical examination showed a well-developed, well-nourished, white woman, who appeared anxious but was in no cardiopulmonary distress. There was no evidence of neurological disease. She was alert, responsive and cooperative during the exam-

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ination. Head, eyes, ears, nose and throat findings were within normal limits. There was a lesion on the posterior aspect of her neck and upper thoracic region measuring 8x6x2 cm, and surrounded by an additional area of more heavily pigmented skin approximately 5 cm in width. (Figure 1) The mass had a nodular, lobulated appearance with focal areas of necrosis. Excoriation and superficial infection were present. Anatomic structures in the anterior neck were normal, and there was no appreciable nodal enlargement. The lateral view (Figure 2) shows the conspicuous deformity caused by the large neoplasm. Her chest was clear to percussion and auscultation. Heart rate and rhythm were normal, with murmurs heard. Her abdomen was slightly protuberant but no abnormal masses were identified. Results of the pelvic and rectal examinations were considered to be within normal limits.

Hospital Course

After a complete radiological and laboratory work-up was completed, and malignancy suspected, the patient was prepared for excision of the lesion.

Wide excision of the mass was accomplished under general endotracheal anesthesia. A split thickness skin graft was applied to the operative wound. (Figure 3) The graft was held in place by the posterior half of a minerva case until capillary ingrowth from the subjacent tissues was adequate to maintain viability. Following this the cast was discarded and simple dressings sufficed. The patient enjoyed a benign post-operative convalescent period and continues to do well several months subsequent to surgery with no evidence of recurrence. A lateral view taken post-operatively (Figure 4) shows the excellent cosmetic result obtained

Figure 1

Posterior view of the large, heavily pigmented neck and upper thoracic region before excision and grafting.

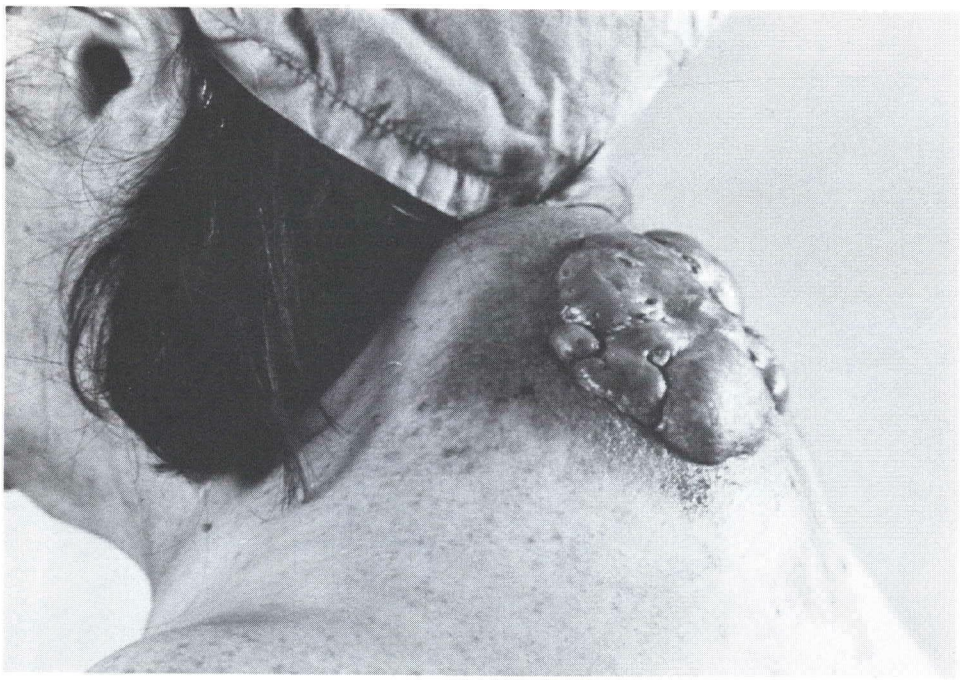

Figure 2

Preoperative lateral view shows conspicuous deformity caused by the large neoplasm.

when compared to the pre-operative picture shown in Figure 2.

The pathologist's report said in part: "Sections including the skin show the irregular acanthosis, papillomatosis, horn cyst formation and hyperpigmentation typical of seborrheic keratosis. In several sections, cystic continuations of the overlying stratified squamous epithelium can be seen. (Figure 5) Broad sheets of uniform squamous cells extend to reach the fascia of skeletal muscle but the deep margin is considered adequate. Within the intervening connective tissue of the dermis and subcutaneous areas is a marked chronic inflammation in which fibrosis inflammatory cells and giant cell reaction are all prominent. Also demonstrated in the sections of the sharply demarcated periphery of this mass are infiltrating tongues of stratified squamous epithelium in which there is a relative increase in the number of mitotic figures. (Figure 6) This lesion is considered to be a low grade epidermoid carcinoma, involving subcutaneous tissue, and there are a few suggestions that this lesion has arisen in a previous epidermal cyst."

Discussion

Epidermoid carcinomas of the skin vary widely in their invasiveness and many of them are of relatively low malignancy with slow penetration of the underlying tissue by malignant cells. Exacerbations of growth, as described, are not unusual. Once the tumor has penetrated through the dermis into the subcutaneous and deeper tissues, it often extends more rapidly into those structures.

Metastasis from epidermoid carcinoma occurs relatively late and infrequently. We found no evidence of

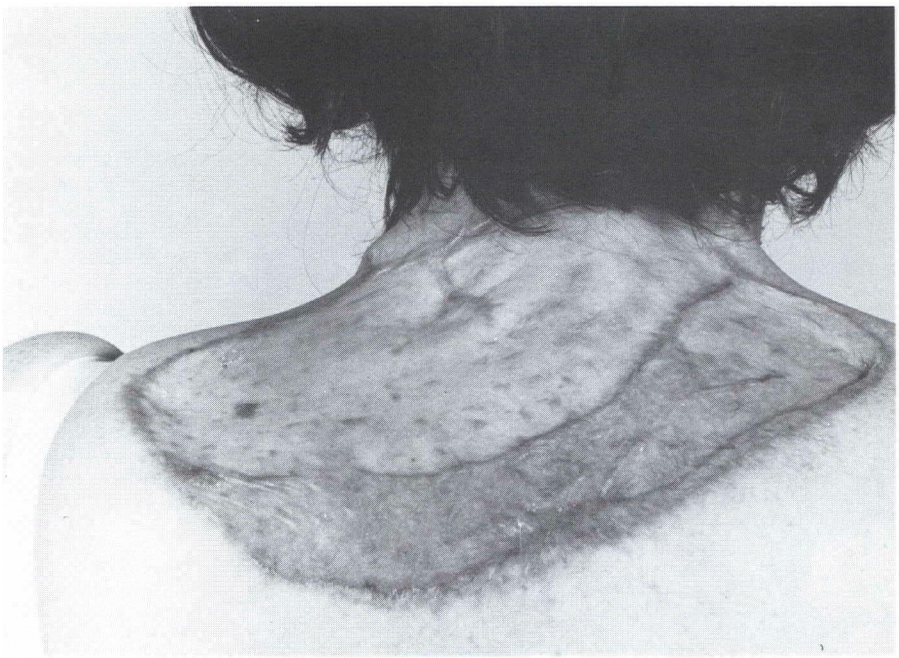

Figure 3

Posterior view shows the result after excision and grafting.

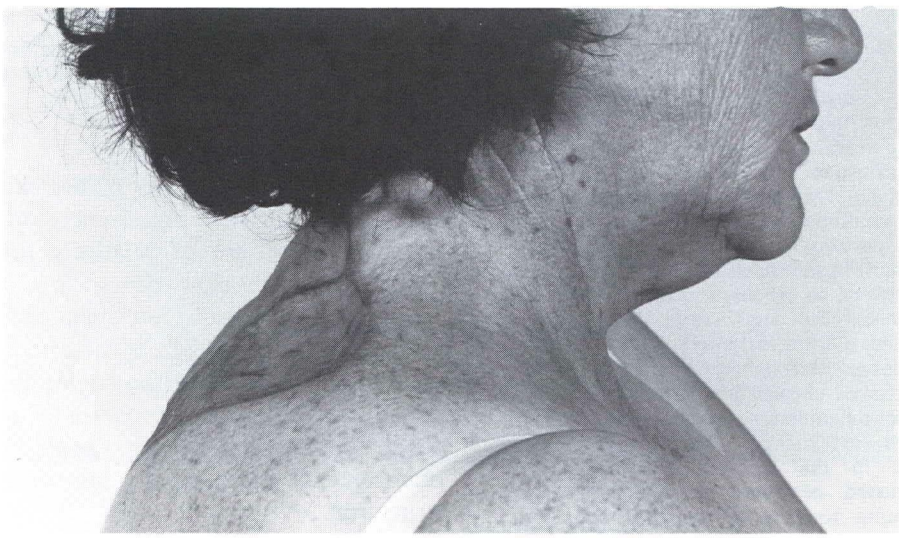

Figure 4

A lateral view showing a more nearly normal contour of the upper back and neck.

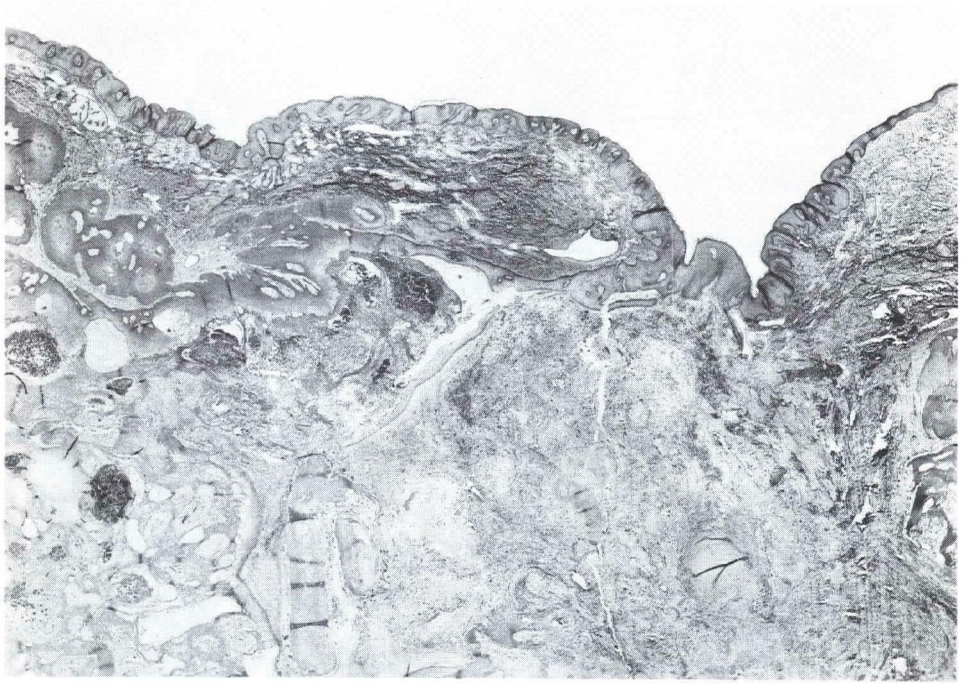

Figure 5

Projection of the stratified squamous epithelium into subcutaneous tissues.

metastasis in the case reported; however, others have reported an incidence of approximately 16% in which such tumors metastasize to regional lymph nodes. The site of the primary growth does not greatly affect the liability to metastasize.[1] The location of the lesion in this case, sitting astride the posterior triangles of the neck, would tend to increase the probability of nodal involvement; however, surgical margins were reportedly free of neoplasm.

Summary

A 52-year-old woman was treated for an epidermoid carcinoma which had developed in an epidermal cyst. Significantly, the lesion for which she sought treatment was first noted 25 years prior to her admission. Two earlier attempts at surgical ablation of the mass were ineffective. Wide excision followed by immediate skin graft coverage of the surgical wound resulted in complete removal of the unsightly growth. A complete cure is expected. The pathologist reported the lesion as an epidermoid carcinoma which arose in an epidermal inclusion cyst. Such tumors metastasize late to regional lymph nodes. Removal of such growths also brings improvement in the patient's outlook on life.

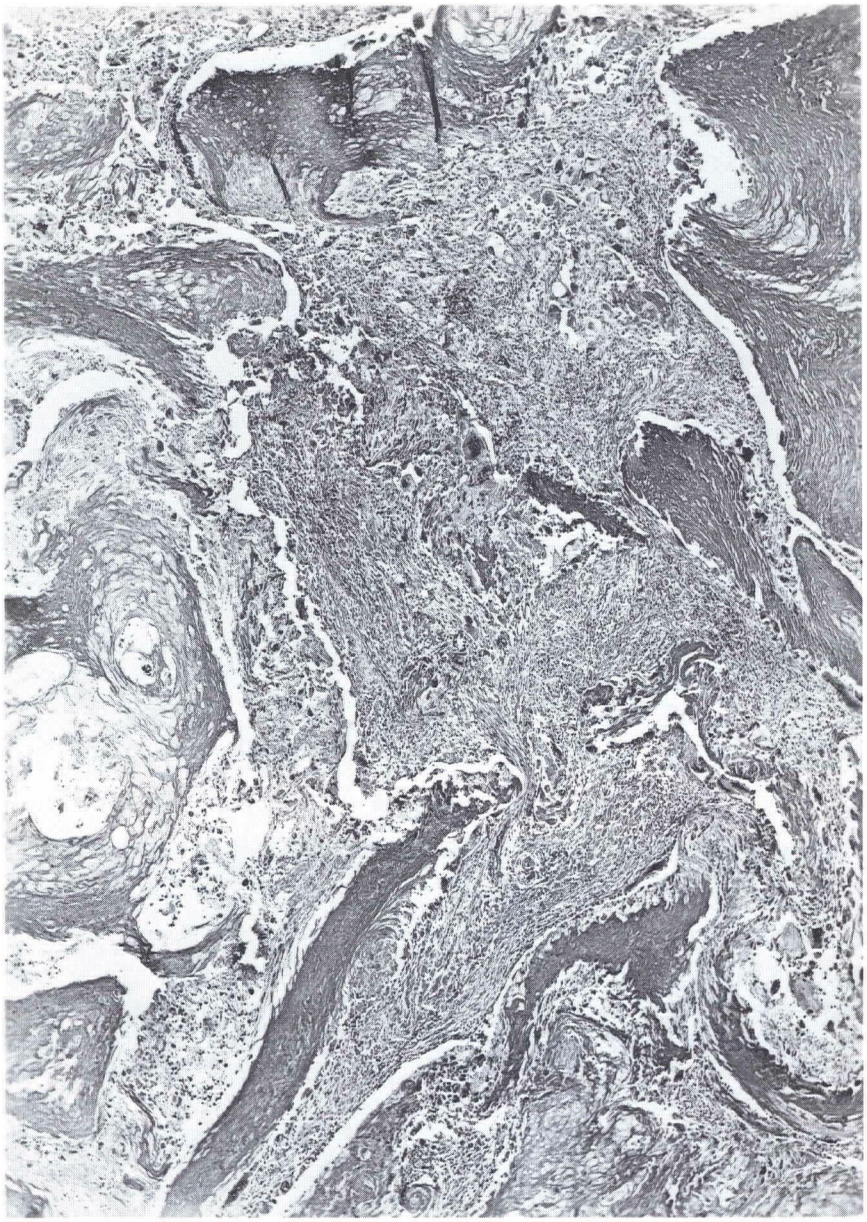

Figure 6

The stratified squamous epithelium shows infiltration. Mitotic figures are seen.

REFERENCE

1. Willis, RA, *Pathology of Tumors,* 4th Edition, London, Butterworth & Co. 1967