

## MALIGNANT EPIDERMAL CYST : A CASE REPORT

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### Summary

A 59 year old Indian female presented with a swelling in the thigh. The clinical diagnosis was an infected sebaceous cyst. Histology of the excised lesion showed an epidermal cyst with malignant transformation. Subsequently, a block dissection of the inguinal lymph nodes was performed. The patient died within 6 months of diagnosis.

Key words: Epidermal cyst, Squamous cell carcinoma.

### INTRODUCTION

Although malignancy developing in an epidermal cyst has been described,<sup>1</sup> the rarity of such an occurrence has been emphasised.<sup>2,3,4</sup> A review of the English literature also revealed that metastatic disease in a malignant epidermal cyst has not been described. This paper reports a malignant epidermal cyst with metastatic disease and considers features which may be relevant to its treatment.

### CASE REPORT

A 59 year old Indian woman presented to the University Hospital, Kuala Lumpur, with a painful, progressive swelling in the left thigh of 3 months' duration. This lesion was clinically diagnosed as an infected sebaceous cyst and the patient was treated with antibiotics. The lesion was subsequently excised. Histopathological examination revealed a well differentiated squamous cell carcinoma arising from the lining epithelium of an epidermal cyst. Subsequently, the patient underwent a left inguinal block dissection. One inguinal lymph node showed metastatic squamous cell carcinoma. No primary site other than the epidermal cyst was discovered. Six months later, she died at home. Terminally, she was observed to have cough and dyspnoea. No autopsy was performed.

### Pathology

The initial specimen consisted of a cystic lesion 5x3x7 cm in maximum dimensions, covered by skin and subcutaneous tissue. The cyst, on sectioning contained abundant "cheesy" material. In addition, a whitish solid tumour, measuring 2x2.5 cm, was seen arising from the cyst wall. The tumour was irregular and infiltrated the adjacent dermis. The epidermis was free of tumour on inspection

(Fig. 1). Microscopical examination revealed a typical epidermal cyst with a focus of well differentiated squamous cell carcinoma arising from the wall (Fig. 2). The cyst wall showed an abrupt transition from benign to malignant epithelium. There was normal dermis between the carcinoma and the overlying epidermis. Extensive sampling of the cyst wall and the tumour showed no continuation between the surface epithelium and the lining stratified squamous epithelium of the cyst or the tumour. The second specimen consisted of three inguinal lymph nodes, one of which showed extensive infiltration by a well differentiated squamous cell carcinoma.

### DISCUSSION

Epidermal cysts are commonly encountered in surgical pathology. In our laboratory, 90 to 100 specimens are examined annually. They are slow growing, benign, intradermal or subcutaneous lesions and malignant transformation is a very rare complication. In our patient, the epithelial lining of the epidermal cyst showed no continuity with the surface epithelium. A well differentiated squamous cell carcinoma was seen arising from the lining squamous epithelium of the cyst. It is difficult to explain why malignant transformation has occurred.

A review of the English literature showed that the last published report was in 1968, when McDonald, in his analysis of 637 epidermal and sebaceous cysts,<sup>4</sup> found malignancy only in 7 (1.1%). Of these, 6 were basal cell carcinomas and only one was a squamous cell carcinoma. There was no metastasis in any of his cases and local excision was deemed satisfactory. Lever and Lever,<sup>1</sup> stated that if a carcinoma arose from an

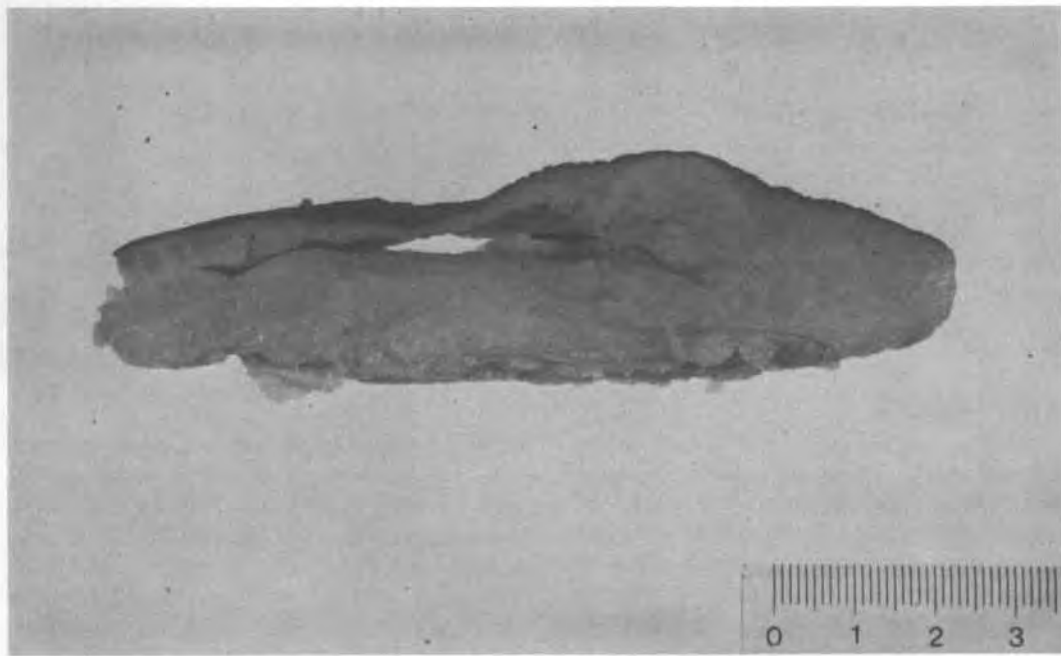


FIG. 1: The specimen consists of a cystic cavity covered by skin and subcutaneous tissue. The carcinoma (arrowed) is seen arising from the cyst.

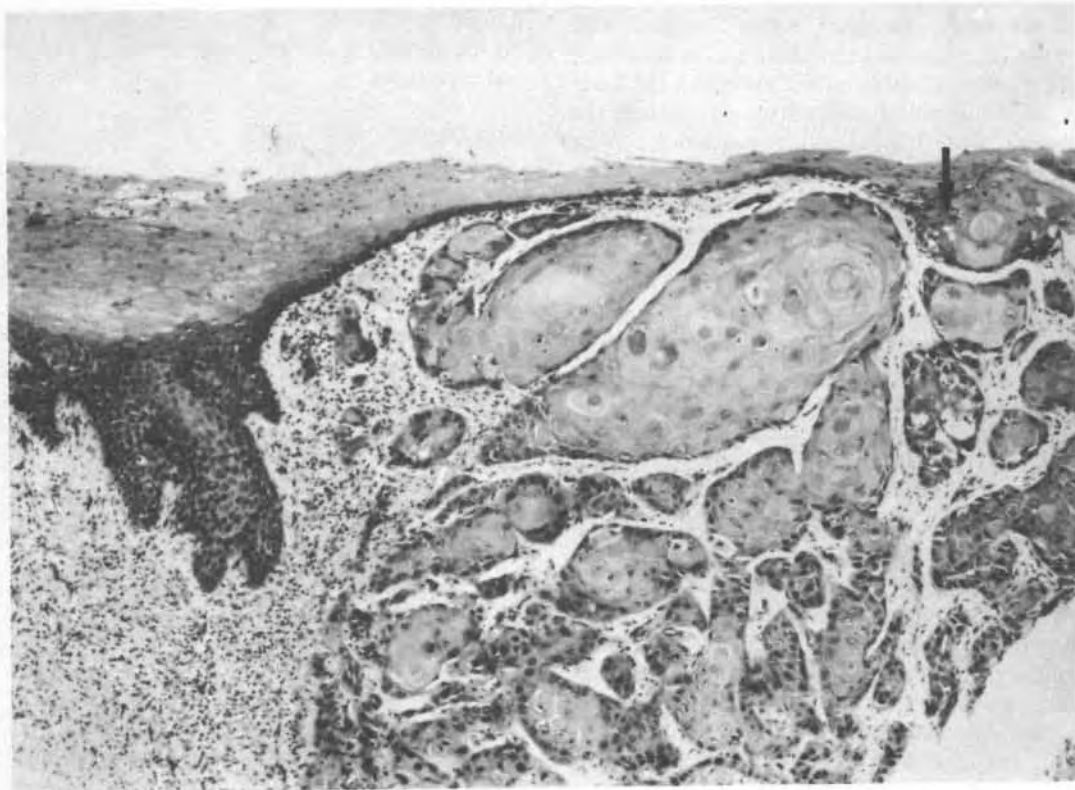


FIG. 2: The cyst is lined by stratified squamous epithelium. A well differentiated squamous cell carcinoma is seen arising from the lining epithelium, infiltrating the dermis. The transition from benign to malignant epithelium is abrupt (arrowed). H & E X200.

epidermal cyst, it was usually of low grade and did not metastasise. However, our patient had evidence of metastatic disease in a regional lymph node. The disparity with **MacDonald's** patients can be explained by the fact that **McDonald's** patients presented with cysts of the face in six cases and of the sternum in one case. At these sites the cysts would have been noticed earlier by the patients as compared to the thigh, and therefore treatment would have been sought earlier. In our patient, the carcinoma had already extended into the surrounding dermis when the cyst was initially excised. It is probable that, although local excision was curative in **MacDonald's** cases, more extensive surgery is required for patients with larger and more advanced lesions.

**REFERENCES**

1. Lever WF, Lever GS. Histopathology of the skin. 6th ed London: JB Lipponcott, 1983: 4824.
2. Rosai J. Ackerman's Surgical Pathology. 6th ed. St. Louis : CV Mosby, 1981: 1034.
3. Warvi WN, Gates O. Epithelial cysts and cystic tumour's of the skin. Am J Pathol 1943; 19: 764-90.
4. **McDonald** LW. Carcinomatous change in cysts of the skin. Arch Dermatol 1968; 37: 208-11.