

Multiple Basal Cell Carcinomas Arising in a Surgical Scar After Radiotherapy

Dear Editor,

A 53-year-old male presented with a 5-month history of dysphagia, cough and chest pain. Computed tomography revealed a mass in mediastinum which was suspicious of thymoma. The adjacent organs were involved, but no pericardial or pleural implants were observed (State III). Surgical excision was performed. Histologically, the tumour contained a mix of fusiform and epithelioid shaped cells with invasion into the thymus capsule. These histological findings were consistent with thymoma type AB, according to the World Health Organization classification. Adjuvant radiotherapy was initiated after surgery with total remission (total dose 40 Gy). Six months later, the patient was referred to our clinic with complaint of erythematous plaques over the surgical scar. Lesions appeared slowly, increasing in size progressively. They were pruritic and non-tender. Clinical examination showed 3 erythematous plaques arising on the scar of the sternotomy, with well-delimited pearly edges and serohematic crusts on surface (Fig. 1). Basal cell carcinomas were considered as diagnosis and the lesions were excised. Microscopic exam showed basaloid tumoural nests enclosed by connective tissue stroma budding from the epidermis, confirming the clinical suspicion (Fig. 2). The edges of resected tissue were free of tumour cells.

Basal cell carcinoma (BCC) is the most frequent malignancy in humans and sunburn is considered the main risk factor.¹ However, exposure to x-rays and other forms of radiation has also been associated. This condition is more frequently observed in persons with light coloured eyes and low skin types (I and II) who always burn and never or minimally tan.¹ Our patient had black coloured eyes and his skin type was III. He also had no history of sunburns in childhood and occupational UV exposure. Therefore, we think that the exposure to radiation to treat the thymoma was the key risk factor for developing the BCCs which appeared only 6 months after radiotherapy. BCCs secondary to exposure to radiation have the same prognosis as those developed after sunlight.² However, physicians should follow up with those patients regularly to examine their skin, due to higher risk of BCCs in those cutaneous areas exposed to radiation. In our case, no more BCCs have been observed, and the patient is still having periodical follow-up. Although there are multiple therapy options for BCC, surgery remains the best option for the possibility of histological examination of the specimen.³ Majority of scar malignancies are epidermoid carcinomas. Basal cell carcinomas developing in sternotomy surgical



Fig. 1. Three basal cell carcinomas arising on the scar of the sternotomy, with well-delimited pearly edges and serohematic crusts on surface.

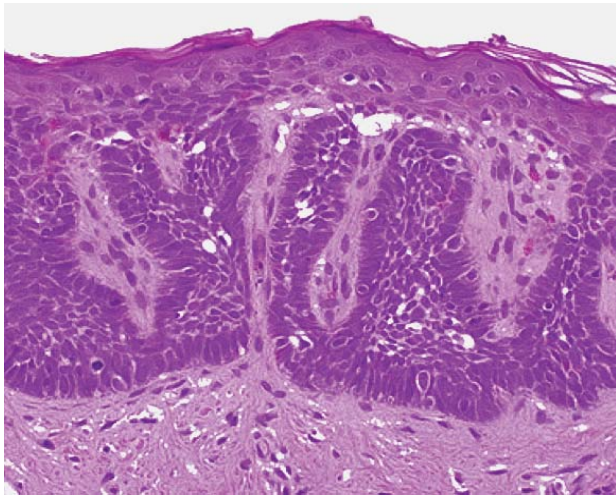


Fig. 2. Basaloid tumoural nests in the dermis (Haematoxylin and Eosin).

scar are extremely rare. Besides, there are no current epidemiological data to quantify risk of skin basal cell carcinoma in surgical skin.⁴ The first cases of BCC in a sternotomy surgical scar are described by Dolan et al.⁵ These authors described that the tumours developed 5 years and 9 months after the operations. In a more recent work, Lau et al⁶ reported a late presentation of BCC in the sternotomy scar 16 years after the surgery

The special feature of our case is the arising of multiple BCCs over the surgical scar in only 6 months after the operation. We have found no previous reports of multiple BCCs in the sternotomy scar.

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