

TUMOUR IMPLANTATION ON A DONOR SITE FROM MALIGNANT MELANOMA OF THE RIGHT ARM : A RARE CLINICAL ENTITY

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Introduction

Tumour implantation is a recognised clinical entity. Great care is taken to excise previous biopsy incisions, remove contaminated instruments from the field of surgery and irrigate the wound before closure.¹ Inappropriate handling of the tumour at the time of primary surgery can lead to implantation of malignant cells. We hereby present an unusual case of malignant melanoma of right upper limb, recurring on the anterior abdominal wall subsequent to a radical excision followed by reconstructive surgery.

Case Report

A 28-year-old man presented in June 1997 with an above elbow amputation of right arm and a non healing ulcer on the anterior abdominal wall of the right iliac fossa (Fig.1). The patient gave a history of a non healing ulcer on the palmar aspect of the right wrist joint of approximately 6x6 cm in size of three months duration. At a secondary level hospital, biopsy revealed a malignant melanoma. A wide local excision with reconstruction of a

cutaneous flap from the anterior abdominal wall to the site of excision was performed. A recurrence of

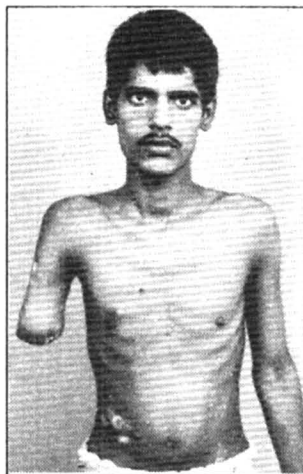


Fig. 1. Right amputated arm and a nodular growth on anterior abdominal wall.

a rapidly increasing ulceroproliferative growth on the whole of the palmar aspect of the wrist, resulted in the treating surgeon performing an above elbow amputation of the right side. The patient was then referred to our institute for the management of progressively increasing non healing ulcer at the donor site of reconstructive surgery,

on the anterior abdominal wall.

Examination revealed a 5x5 black nodular growth on the abdominal wall surrounded by a hypertrophic scar with underlying induration (Fig.2). Swelling was non tender and fixed to the anterior abdominal wall, located in the right iliac region.

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Biopsy from the non healing ulcer revealed malignant melanoma, consistent with the histology of primary tumor. Complete metastatic work up of the patient



Fig.2. Nodular black growth surrounded by a hypertrophic scar over right anterior abdominal wall.

including complete haemogram, liver and renal function tests, X-ray chest and ultrasound of abdomen and pelvis were all within normal parameters. Thus, in view of the presenting history, a thorough clinical examination and investigation, a diagnosis of tumor implantation at the donor graft site was made and was treated accordingly.

He was treated by a short course of palliative radiotherapy to the anterior abdominal wall. 500cGy per fraction weekly for 4 weeks were delivered by a telecobalt unit. He noticed significant pain relief and excellent resolution of the tumor. The patient is presently alive at the end of six months of follow up.

Discussion

Tumour implantation is an infrequent occurrence, but has never been reported for malignant melanoma.

Implantation occurring during tumour surgery and flap reconstruction is particularly uncommon. Sherman et al,² described implantation of fibrosarcoma to the donor site using a cross leg flap. The case of Mohaffy et al,³ involved tumour occurring at the base of a deltopectoral flap used to reconstruct an incompletely excised oral car-

cinoma. Saphir⁴ had demonstrated that apparently viable tumour cells could be collected from the scalpel used to cut into breast carcinoma. Safour et al⁵ proved the theory that scalpel used to perform biopsy in a hamster pouch carcinoma is universally contaminated with malignant cells.

Tracheostomy site recurrence after total laryngectomy is a well known and a fatal complication that occurs in 3% to 40% of the patients.⁶ Cutaneous implantation is now a recognised complication of percutaneous diagnostic needle biopsy.⁷ Tumor implantation at the donor site or tracts in case of malignant melanoma is quite rare in clinical practice. Quantification of tumour seeding from fine needle aspiration in ocular melanomas revealed that the amount deposited in the tracts was not sufficient to be associated with tumour growth in experimental models.⁸

It is suggested that great caution is needed while performing the cancer surgery, by removing the contaminated instruments, in order to reduce the risk of tumor implantation or seeding.

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