SQUAMOUS CELL CARCINOMA AS A LATE COMPLICATION OF CHRONIC OSTEOMYELITIS

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ABSTRACT

Squamous cell carcinoma is a rare but well documented complication of chronic osteomyelitis. With the advent of antibiotics, better health care delivery to the people and improving socioeconomic conditions, the incidence of squamous cell carcinoma arising as a late complication of acute haematogenous osteomyelitis has become increasingly less. Occasional difficulty in the differential diagnosis of a pseudoepitheliomatous hyperplasia and well differentiated squamous cell carcinoma can be troublesome. These two cases are presented to remind the clinician of this now increasingly rare complication of chronic osteomyelitis and the occasional diagnostic dilemma involved in its histopathological diagnosis.

Key Words: Squamous Cell Carcinoma, Chronic Osteomyelitis.

INTRODUCTION

Squamous cell carcinoma is a rare but well documented complication of osteomyelitis.¹⁻⁹ Prompt and adequate treatment of acute haematogenous osteomyelitis can prevent this complication arising from the same. With the advent of antibiotics, better health care delivery to the people and improving socio-economic conditions, the incidence of squamous cell carcinoma arising as a late complication of acute haematogenous osteomyelitis will become increasingly less. However, it is a complication well worth remembering for an orthopaedic surgeon because if it is caught in the earlier stages, ablative surgery produces reliable cure.

CASE # 1

Mr. SBR 54/M from the eastern hills of Nepal came to the Orthopaedic OPD of BPKIHS with complaints of a foul smelling non-healing ulcer left leg for the last seventeen years.

Fig.1: X-Ray of Case No.1 showing chronic osteomyelitis of left tibia with involvement of almost the whole of the bone except the lower fourth.

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Fig. 2: X-Ray of Case No.2 showing chronic osteomyelitis of lower half of left femur.

About 40 years ago, the patient developed features suggestive of acute haematogenous osteomyelitis of left tibia. Due to ignorance and lack of medical doctors nearby, he did not receive proper treatment, and the patient developed chronic osteomyelitis with discharging sinus from left tibia. The sinus healed to recur similarly again 5/6 times in the next 23 years. Around 17 years ago, the sinus started discharging pus and the tract did not close. The wound became so foul-swelling that his relatives and friends started staying away from him.

He came to British Military Hospital, Dharan where sequestrectomy curettage and sinus tract excision was done. He was relieved of his symptoms for some time but the foul smelling, discharging sinus and ulcer recurred. The ulcer did not heal with regular dressings. On examination, there was an

Fig. 3: Squamous Cell Carcinoma. There are irregular masses of epidermal cells proliferating downward into the dermis (H & E, X 4)

ulcer about 6cm x 5 cm x 3cm over antero-medial aspect of upper third of left leg. The floor of the ulcer was dirty, the margins were everted and it was discharging foul-smelling, dirty colored fluid. X-ray showed evidence of chronic osteomyelitis of left tibia with involvement of almost the whole of the bone except the lower fourth (Fig.1). Biopsy from the ulcer margin including the adjacent tibia revealed features of pseudoepitheliomatous hyperplasia (PEH) of squamous epithelium. A repeat biopsy from deeper tissues showed well differentiated squamous cell carcinoma (Fig. 3 & 4). Chest x-ray showed no cannon-ball deposits and other haematological and biochemical parameters were within normal limits. An above knee amputation was done. A follow-up after 1½ years showed no metastasis.

CASE # 2

Mr. KM 45/M from the eastern hills of Nepal presented with complaints of a non-healing ulcer in the lower left thigh for

Fig. 4: Squamous Cell Carcinoma. The cells are predominantly mature squamous cells showing relatively slight atypicality. Horn peral is also seen. (H & E, x 40)

about 20 years. The history suggestive of acute osteomyelitis was very similar to Case#1. On examination there was an ulcer about 5cm x 4 cm x 2 cm with a dirty floor, the base comprising of the femur. The margins were rolled and everted. X-ray showed chronic osteomyelitis of the lower half of left femur (Fig.2) and biopsy showed pseudoepitheliomatous hyperplasia of the squamous epithelium. Again a repeat deeper biopsy showed well-differentiated squamous cell carcinoma X-ray chest, biochemical and hematological parameters were normal. Dis-articulation of left hip was advised but was refused by the patient.

infection. However, current literature demonstrates that Mohs micrographic surgery^{8,9} offers a good therapeutic limb sparing option for control of locally invasive disease.

REFERENCE

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