Case Report

Metastatic Amelanotic Malignant Melanoma with Unknown Primary - A Case Report

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Introduction

Malignant melanoma is a relatively common neoplasm of melanocytes. The lesion is classically pigmented although amelanotic melanomas are known to occur. The tumour is prone to metastasize early with lymph node metastases presenting earlier than haematogenous metastases [1]. Melanomas presenting with unknown primaries are rare. We describe a case of a metastatic amelanotic melanoma with an unknown primary in a young woman.

Case Report

A 22 year old female presented with a right axillary mass clinically suspected to be a group of enlarged lymph nodes. The mass was lobulated and measured 5x3 cm. It was mobile, non-tender and firm to feel. Examination of the draining areas showed no skin or mucous membrane lesion and no palpable soft-tissue nodule/tumour. FNAC done from the mass showed a cellular aspirate comprising a spindle and a round cell population. The cells showed a high nuclear-cytoplasmic ratio with large nucleoli and mitotic activity. A provisional diagnosis of metastatic deposits of occult soft tissue sarcoma in right axillary lymph nodes was made and surgical biopsy was advised. Excision biopsy was performed and gross examination of the biopsied specimen showed a grey white, firm, lobulated mass measuring 5x3 cm. The cut surface was grey white with areas of necrosis. Histopathology showed an almost complete effacement of lymph nodal architecture by a tumour process comprising mixed population of epithelioid cells and spindle cells (Fig. 1, 2). Mitotic activity was brisk. Large areas of necrosis were also seen. No pigment was visualised in the sections.

Immunohistochemistry was performed on the tissue and the tumour cells were found to be positive for both S100 protein and Melanoma Specific Antigen. Electron microscopy revealed an abundance of melanosomes in the cytoplasm of both the spindle and epithelioid cells (Fig.3). The final diagnosis was metastatic deposits of amelanotic malignant melanoma. Bony metastases were detected soon after the

diagnosis. The patient died three months after diagnosis inspite of chemotherapy.

Discussion

Metastatic melanoma with an unknown primary is a rare lesion and the incidence has been variously reported between 2-10% [2,3]. Metastatic deposits to various sites have been reported including sites like the brain and lymph nodes [3-5]. The prognosis of this condition is still controversial, although studies indicate that there is no difference in prognosis when compared to cases where the primary tumour has been identified [2]. In most cases where the primary tumour could be identified initially, the history was that of a spontaneously resolving pigmented lesion. Following the resolution of the lesion, one may see either a hypopigmented area or an irregular flat pigmented scar at the site [1]. No such lesion was seen in this patient.

The amount of melanin produced varies greatly in melanomas. However, the incidence of amelanotic melanomas is rare as compared to their pigmented

Fig. 1 : Effacement of lymph node architecture by spindle cells (x 100)

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Fig. 2 : Epithelioid cell component showing ample cytoplasm, large nuclei and prominent nucleoli (x 400)

counterparts. Velez et al [3] studied 1045 patients with melanomas and reported an incidence of 12%. The prognosis of amelanotic melanomas is believed to be poor. The ten-year survival is only 10% as reported by Ariel [6]. This contrasts sharply with the ten-year survival in pigmented melanomas which has been reported as 63%.

The most striking feature of melanomas lies in the variation in cellular arrangement and morphology. An alveolar pattern is common, alternating elsewhere with sheet like areas of epithelial-like cells and spindle cells. The epithelioid cells are large and pale with round or oval nuclei of various sizes and distinct nucleoli. Spindle cells are pleomorphic and poorly defined [7]. This case showed all the features outlined above. There was no predominance of either the epithelioid or spindle cell pattern-both cell types were represented equally. Electron microscopy contributes greatly to the confirmation of a diagnosis of malignant melanoma through the identification of melanosomes. At times, ultrastructural demonstration of melanosomes is the only method of reaching a conclusive diagnosis of melanoma when immunohistochemical staining for both S100 protein and HMB 45 are negative.

The aim of presenting this case is to make pathologists

Fig. 3 : Electron micrograph, tumour cells showing melanosomes in cytoplasm (x 40,000)

aware of the existence of a combination, albeit rare, of two features in a melanoma - viz (a) occult primary lesion with clinical presentation of metastases in lymph node (b) metastatic amelanotic melanoma. Such an occurrence is apt to cause diagnostic confusion if the existence of this combination is unknown.

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