CUTANEOUS MALIGNANT MELANOMA: A CASE REPORT

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Abstract
Melanoma is malignant neoplasm of melanocytic origin that arises from a benign melanocytic lesion. The increase in its mortality rate is second only to lung cancer. Incidence reported in India is 1:100000. Etiology includes sunlight, trauma, genetic factors, and chemicals like polychlorinated biphenyls. Superficial spreading melanoma is the most common head and neck melanoma, approximately 50%, with an increase Incidence during 4th to 5th decade. Treatment options of these tumors include surgical excision of the primary lesion, sentinel lymph node / elective lymph node dissection, chemotherapy, radiation therapy. Agents used in chemotherapy are Dacarbazine (objective response in 20% of the patients). Drugs which can be used in combination are Carmustine, Cisplatin, Dacabazine&Tamoxifen (response in 50%). Radiation therapy with dose of (400-500cGy). Although malignant melanomas are a rare entities in pigmented races but still their presence cannot be overlooked. Every benign pigmented lesion should be carefully examined, and any suspicion of malignancy should be thoroughly investigated.
Key words:Malignent melanoma, Lentigomaligna, Nodular melanoma, Acrallentigious melanima.

Introduction

Melanoma is malignant neoplasm of melanocytic origin that arises from a benign melanocytic lesion or can arise de novo from melanocytes within otherwise normal skin or mucosa.It is one of the most biologically unpredictable and deadly of all human neoplasms.The increase in its mortality rate is second only to lung cancer. Incidence reported in India is 1:100000. CMM is fourth commonest cancer in Australia and New Zealand, the tenth in the USA, Canada and Scandinavia and the eighteenth in Great Britain. 20% of melanomas occur in the head and neck region of which 51% are in the facial region. Etiology includes sunlight, trauma,genetic factors, and chemicals like polychlorinated biphenyls. Melanomas are extremely uncommon in pigmented races. The most common signs of early melanoma include an increase in size or a change in color or shape of a pigmented lesion. The most common symptom is pruritus. Later signs and symptoms include tenderness, bleeding, and ulceration.[1] Two directional growth patternsareseen: radial and vertical.Clinicopathological types includes superficial spreading, nodular, lentigomaligna, acrallentiginous (mucosal lentiginous).[2]

Superficial spreading melanoma is the most common head and neck melanoma, approximately 50%, with an increase Incidence during 4th to 5th decade. Clinically, it appears as a mixture of colors brown/tan, pink/white, black with irregular borders and shows biphasic growth with the vertical phase heralded by elevation and surrounding erythema.[3] Though superficial type of malignant melanoma is the most commonly occurring, but it is only in western countries[3] and it originates from small congenital melanocytic nevi. Lentigomaligna has Incidence rate of 20% among all head and neck melanomas and shows the longest radial growth phase sometimes greater than 15 yrs,typically, itoccurs in the elderly in sun exposed facial skin. Clinically, they appear as a dark, irregular ink spot. [3, 4]

Nodular melanomacomprises approximately 30% of head and neck melanomas. They commonly occur in the 5th decade and show an aggressive monophasic growth pattern. They tend to occur in both sun exposed and unexposed areas. They can appear well circumscribed and blue/black in color or show areas of nodularity and involution within an irregular plaque.[3, 4] Acrallentiginous melanoma is the most common form of melanoma in blacks, and also most common form of oral melanoma. Clinically it involves the digits; particularly the nail bed and mucosal membranes and appears as darkly pigmented, irregularly marginated macule, which later develops a nodular invasive growth phase. This case report presents a case of malignant melanoma arising from a pre-existing mole; the rarity corresponds to the location, type, and racial predilection.

Case Report

A 51 Year old male reported to the dental OPD with the chief complaint of a small black colored growth below the right eye for the past 20 years. Patient had a small rounded growth in the same region since birth which remained static for a period of 20 years. After this period patient experienced an increase in size of the lesion and also experienced an itching sensation over the lesion. The patient went to some local practioner in his village who excised the lesion and applied some chemicals after excision but the lesion didn't stopped increasing in size. No history of any systemic disease was reported. History of bidi smoking was present 10-12 bidis/day for the past 30 years. General physical examination findings were normal with no lymphadenopathy. Black colored plaque just below the right eye involving the distal part of the lower eye lid extending upto the midfacial region was seen. The lesion measured 3cm by 2.5cm with raised

(Figure 1). On palpation no tenderness, fixity to the underlying structures or induration was present, and the surface of the lesion was rough with slightly raised & irregular borders. Based on history and clinical examination a provisional diagnosis of superficial spreading melanoma was made. Seborrheic keratosis, Melanocytic nevus was considered in differential diagnosis. Complete Haemogram, Urine analysis, PNS, PA (Figure 2 & 3). of head and facial region and an excisional biopsy (Figure 8-9) of the lesion was advised. The blood values were under normal limits and no abnormality was detected in urine examination reports.

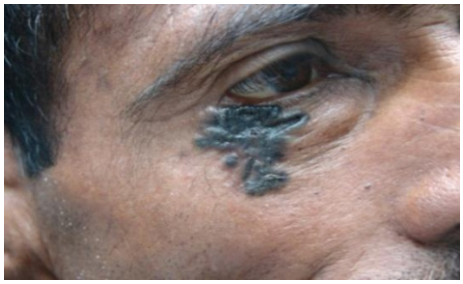

Figure 1: The lesion measured 3cm by 2.5cm with raised irregular borders and a slightly depressed central area

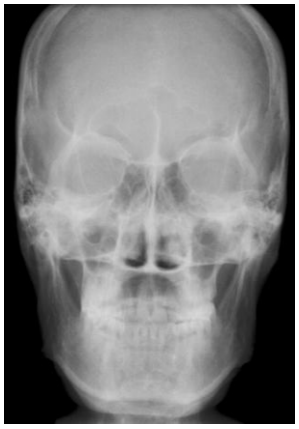

Figure 2: PA views showing no underlying involvement

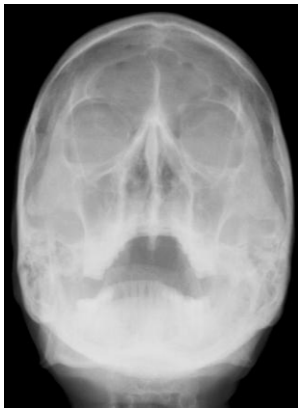

Figure3: PNS views Showing no under lying involvement view CT scan

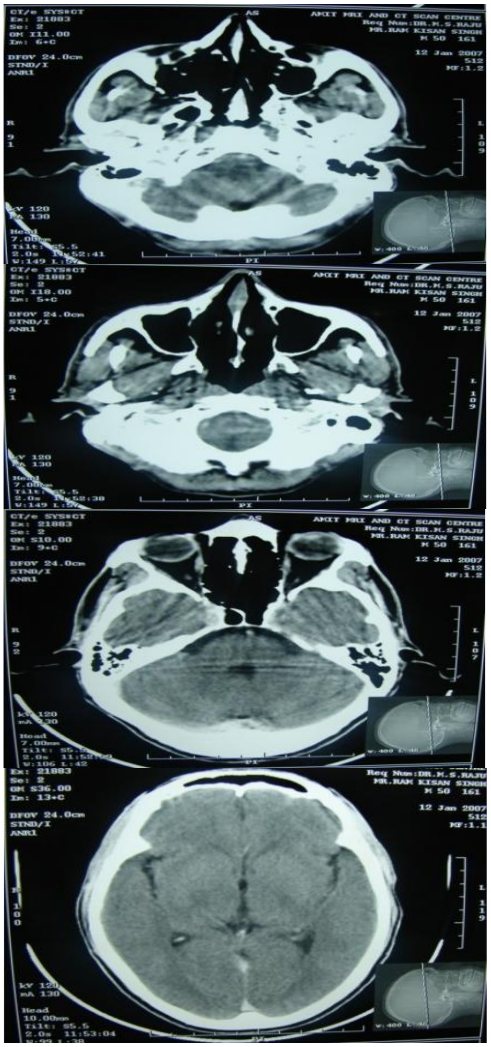

Figure 4, 5, 6, 7: CT imaging results showed no underlying involvement of the bone and no involvement of the orbit or the lymph nodes & intracranial extension

PA & PNS views showing no underlying involvement. CT imaging results showed no underlying involvement of the bone and no involvement of the orbit or the lymph nodes & intracranial extension. Final diagnosis of malignant melanoma (superficial spreading) was made based on histopathological examination.

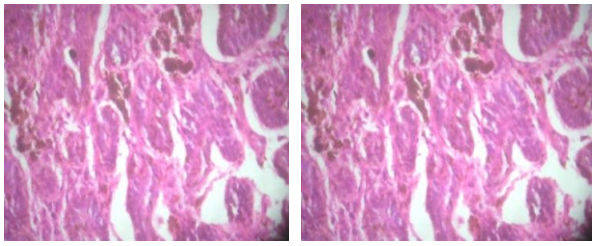

Figure 8&9: Showing Histopathology at 10X and 40X magnification showing melanocytes arranged in nests.

Discussion

Malignant melanoma is characterized by two growth phasesnamely radial growth phase (RGP) and vertical growth phase. Radial growth phase is associated with non tumorigenic melanoma and In situ or microinvasive types which involves, superficial spreading melanoma (SSM)-67% of all melanoma, lentigomaligna melanoma (LMN)-9%, acral-lentiginous melanoma (ALM)-4% and Unclassifed radial growth phase (URGP)-5%.Vertical growth phase (VGP) associated with tumorigenic melanoma with no RGP compartment, Nodular melanoma (NM)-10% of all melanomas, RGP compartment present (may be SSM, LMM, ALM, URGP)-90% , unsual vertical growth phase-96%, Desmoplastic- 3% most are neurotropic, Neurotropic not desmoplastic-1%.[5,6,7] Major clinical criteria for the diagnosis involve ABCD, i.e. A asymmetry (half of the lesion does'nt match the other half in shape or color distribution), B lesional borders irregularity (lesion tend to be indented coastline like the map of a island), C lesional color variegation (the surface is multicolored and may include shades of brown, blue-black, gray white and other variations), D diameter (generally > 6mm, although some melanomas are smaller)[3,4]. The staging of the tumor is based on the guidelines given by American Joint Commission on Cancer although complex but can be broken down into Stage I and II representing local disease, Stage III regional lymph node and/or in-transit disease and Stage IV distant disease .[4] Treatment options of these tumors include surgical excision of the primary lesion, sentinel lymph node / elective lymph node dissection, chemotherapy, radiation therapy. Surgical treatment is done according to Breslow level which shows the relation between size of the lesion and the depth to which it needs to be excised, it states that if tumor size is less than 1 mm depth should be 1cm, for 1-4mm lesions it is 2cm & for lesions more than 4mm depth should be 3cm. Depth of all the excisions should be to the underlying muscle fascia.[3,4] Elective node dissection by performing sentinel node biopsy results in an increased survival rates in the patients with malignant melanomas.[8] Response rates of chemotherapeutic agents is limited (only 25%) and can be used in early disease or in patients who already had underwent lymph node dissection. Agents used in chemotherapy are Dacarbazine (objective response in 20% of the patients). Drugs which can be used in combination are Carmustine, Cisplatin, Dacabazine&Tamoxifen (response in 50%).[3, 4] Radiation therapy with dose of (400-500cGy) is indicated in Unresectable lesions and patients who are too ill to undergo surgery, Lentigomaligna melanoma, where only superficial growth is present and surgery is disfiguring. In head and neck region radiation therapy has shown to decrease the recurrence of the condition. Radiation therapy can also be used to palliate metastatic disease especially to bone.[3, 9, 10] Although malignant melanomas are a rare entities in pigmented races but still their presence cannot be overlooked. Every benign pigmented lesion should be carefully examined, and any suspicion of malignancy should be thoroughly investigated.

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