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Case Report

A Giant Malignant Melanoma Presenting as Submandibular Lump: A Case Report

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Abstract

Malignant melanoma with its varied clinical presentations and histomorphological patterns is a perplexing problem. We hereby report a case of malignant melanoma presenting as submandibular lump in 80-year-old female since 6 months and was rapidly increasing in size. On cytology, it was diagnosed as malignant melanoma.

Key words: Malignant melanoma, submandibular lump, head and neck

INTRODUCTION

Melanoma is a malignant tumor produced from malignant transformation of melanocytes. This can be sporadic or arise from a pre-existing premalignant lesion. As melanocytes are of neural crest origin, they can arise in other locations where neural crest cells are present, including the brain and gastrointestinal tract.[1] Approximately 10–25% of melanomas are found in the head and neck region and majority of them (85–90%) are cutaneous lesions, most often arising in the skin of face.[2] In 2019, this type of malignancy was the third most frequent cancer to be diagnosed in males and the fifth most in females according to the American Cancer Society and the National Cancer Institute.[3] Malignant melanoma with its various clinical presentations and histomorphological patterns is a perplexing problem both for the diagnosticians and clinicians. We hereby report a case of malignant melanoma presenting as a submandibular lump in 80 year old female. This lump was present for 6 months and was rapidly increasing in size.

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CASE DESCRIPTION

A 80-year-old female presented to ENT outpatient department of our hospital with a mass in the left submandibular region for 6 months which was rapidly increasing in size. On clinical examination, there was a large mass measuring 4*4 cm in size in the left submandibular region which was non-tender, fungating with involvement of the skin [Figure 1]. It was foul smelling with presence of black crusting and oozing of blood. Bilateral level 1, 2, and 3 lymph nodes were involved. Fine-needle aspiration cytology from this mass yielded positive for malignant cells.

Biopsy was taken from the mass and on microscopic examination that it showed extensive ulceration and focal parts of tumor arranged in form of sheets of oval to spindle shaped tumor cells having hyperchromatic nuclei, visible nucleoli, and moderate cell cytoplasm. Areas of intracellular pigment deposition noted.

Meanwhile contrast-enhanced computed tomography was done which showed a well-defined heterodense enhancing lesion in the left submandibular region approximately 44*42*41 mm suggesting possibility of neoplastic etiology. Further, 18 fluorodeoxyglucose positron emission tomography computed tomograph showed metabolically active large ill-defined heterogeneously enhancing soft-tissue density lesion in the left submandibular region. The lesion was involving the overlying skin and no calcification

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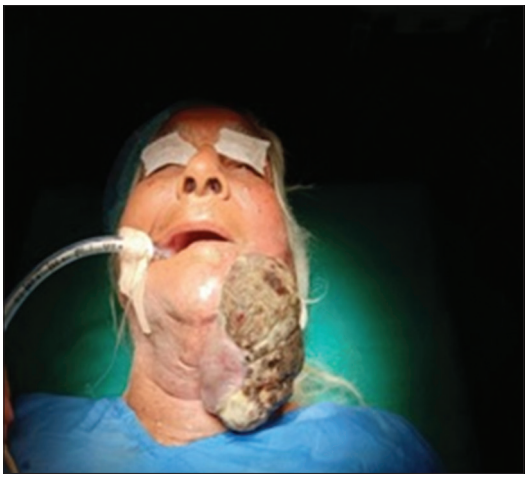

Figure 1: A large mass measuring 4*4 cm in size in the left submandibular region with fungating involvement

noted within the lesion. Few hypodense areas suggestive of necrosis noted within the mass lesion abutting left ramus of mandible with no obvious erosion.

Considering the site and morphology, a diagnosis of malignant melanoma was considered and an urgent excision was advised. The patient was taken up for the surgery, and intraoperatively, the mass was found involving the overlying dermis only. However, the submandibular salivary gland was not related to the mass. The mass was excised and sent for histopathological examination. Hematoxylin and eosin stained sections showed malignant tumor arranged in sheets. The individual tumor cells have oval to spindle shaped nuclei, vesicular nuclear chromatin, prominent nucleoli, and moderate amount of cytoplasm. Few of the tumor cells exhibit melanin pigment in the cytoplasm [Figure 2]. In view of these findings, final diagnosis of malignant melanoma was made.

DISCUSSION

Metastatic melanoma with its variable morphological features is a great histopathological mimicker and may be confused with tumors of nearly all lineages. Various superficial soft-tissue tumors with epithelioid and/or spindle cells or with pigment can mimic it. The prevalence of solitary lesions of melanoma confined to dermal or subcutaneous tissue has been reported to be 0.51%, 0.63%, and 0.92% in three large series.[4,5] The sites included are the head and neck, upper extremity, lower extremity, and trunk.

Clinically, lesions are classified according to their depth, as follows:

- Thin – 1 mm or less
- Moderate – 1 mm to 4 mm
- Thick – >4 mm

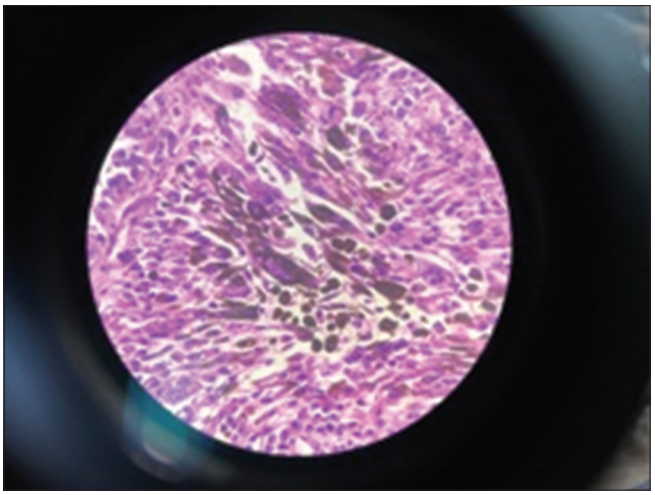

Figure 2: Histopathological slide image showing malignant tumor arranged in sheets having oral to spindle shaped nuclei, vesicular nuclear chromatin, prominent nucleoli, and few of the tumor cells exhibit melanin pigment in the cytoplasm

According to the growth pattern, there are four major types of melanoma:

- Superficial spreading melanoma constitutes approximately 70% of melanomas, usually flat but may become irregular and elevated in later stages; the lesions average 2 cm in diameter, with variegated colors, as well as peripheral notches, indentations, or both
- Nodular melanoma accounts for approximately 15–30% of melanoma diagnoses; the tumors typically are blue-black but may lack pigment in some circumstances
- Lentigo maligna melanoma represents 4–10% of melanomas; the tumors are often larger than 3 cm, flat and tan, with marked notching of the borders
- Acral lentiginous melanoma constitutes 2–8% of melanomas; may appear on the palms and soles as flat, tan or brown stains with irregular borders.[6]

Classically, melanoma lesions have been staged according to the Clark staging system, a description of the histologic level of invasion and the Breslow staging system, and a measure of the absolute depth of the lesion [Table 1].[7,8]

With the adoption of American Joint Committee on Cancer TNM staging system, the definition of nodal staging has become increasingly important. 10–30% of melanoma patients present with clinically detectable cervical metastases.[9]

In our case, the depth was <1.5 mm and it was classified under II category.

The preferred method of tissue sampling for the diagnosis of melanoma is excisional biopsy with a margin of normal tissue measuring at least 2 mm.

Table 1: Clark and Breslow staging systems

Clark	Breslow
Confined to epidermis	I<0.75 mm
Invading papillary dermis	II 0.76–1.5 mm
Abutting papillary-reticular junction	III 1.51–4.0 mm
Invading reticular dermis	IV>4.0 mm
Subcutaneous invasion	V —

Surgery such as wide local excision with sentinel lymph node biopsy, elective node dissection, or both is the definitive treatment for early-stage melanoma. When performing the wide local excision, first consider the surgical margins. If the primary closure is not feasible, skin grafting or tissue transfers may be needed.[10] Medical management is reserved for adjuvant therapy of patients with advanced melanoma.

CONCLUSION

Malignant melanoma with its varied clinical presentations and histomorphological patterns is a perplexing problem. Malignant melanoma is a difficult diagnosis to make particularly when the primary site is not known. Since it is an aggressive tumor, the importance of timely diagnosis is unquestionable.

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REFERENCES

1. Elder DE, Murphy GF. Benign melanocytic tumors. In: Rosai J, Sobin LH, editors. Atlas of Tumor Pathology: Melanocytic Tumors of the Skin. Washington, DC: Armed Forces Institute of Pathology; 1991. p. 103-205.
2. Lopez F, Rodrigo JP, Cardesa A, Triantafyllou A, Devaney KO, Mendenhall WM, *et al*. Update on primary head and neck mucosal melanoma. Head Neck 2016;38:147-55.
3. Miller KD, Nogueira L, Mariotto AB, Rowland JH, Yabroff KR, Alfano CM, *et al*. Cancer treatment and survivorship statistics, 2019. CA Cancer J Clin 2019;69:363-85.
4. Schlagenhauff B, Stroebel W, Ellwanger U, Meier F, Zimmermann C, Breuninger H, *et al*. Metastatic melanoma of unknown primary origin shows prognostic similarities to regional metastatic melanoma: recommendations for initial staging examinations. Cancer 1997;80:60-5.
5. Bowen GM, Chang AE, Lowe L, Hamilton T, Patel R, Johnson TM. Solitary melanoma confined to the dermal and/or subcutaneous tissue: Evidence for revisiting the staging classification. Arch Dermatol 2000;136:1397-9.
6. Heistein JB, Acharya U, Mukkamalla SK. Malignant Melanoma. In: StatPearls. Treasure Island: StatPearls Publishing; 2022
7. Clark WH Jr., From L, Bernardino EA, Mihm MC. The histogenesis and biologic behavior of primary human malignant melanoma of the skin. Cancer Res 1969;29:705-27.
8. Breslow A. Thickness, cross-sectional area and depth of invasion in the prognosis of cutaneous melanoma. Ann Surg 1970;172:902-8.
9. American Joint Committee on Cancer. Manual for Staging of Cancer. 6th ed. Philadelphia, PA: Lippincott Williams and Wilkins; 2002:209-20.
10. Reserva J, Janeczek M, Joyce C, Goslawski A, Hong H, Yuan FN, *et al*. A retrospective analysis of surveillance adherence of patients after treatment of primary cutaneous melanoma. J Clin Aesthet Dermatol 2017;10:44-8.

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