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Case Report

Primary malignant melanoma of the nipple: a case report

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ABSTRACT

Primary melanoma originating on the female nipple remains an extremely rare variant of malignant melanoma and only a few cases have been reported in the literature. We describe a case of a patient admitted for a black pigment deposition on the left nipple. Surgical resection of the left nipple and areola with clear margins and an axillary lymph node dissection was performed confirming the diagnosis of non-invasive superficial spreading melanoma.

Keywords: Melanoma, Breast, Nipple, Surgery

INTRODUCTION

Malignant melanoma is a highly malignant neoplasm that is derived from melanocytes. Its incidence has risen markedly over the last decade. It occurs anywhere on the body, however, is commonly found in the skin, mucous membranes and the choroid. Breast localization of malignant melanoma is a rare entity, accounting for less than 0.5% of all breast cancers.^{1,2} In this article, we report a rare case of malignant melanoma of the nipple.

CASE REPORT

A 54-year-old woman presented with black pigment deposition on the left nipple. The nevus had grown slowly for approximately 3 years. She had no history of breast trauma or malignancy. Breast examination revealed a soft, elastic nodule located on the left nipple and measuring 2.5 cm×2 cm (Figure 1). There were no palpable masses in the breast, nipple discharge, axillary or supraclavicular lymph nodes. A differential diagnosis of Paget's disease or malignant melanoma was made. All laboratory data including tumor markers were

unremarkable. Mammography and breast ultrasonography did not show any abnormality. Initial nipple biopsy was performed and revealed non-invasive superficial spreading melanoma. The patient underwent a surgical resection of the left nipple and areola with clear margins and an axillary lymph node dissection. The pathologic report confirmed the diagnosis of non-invasive superficial spreading melanoma and no metastasis was identified in the left axillary lymph nodes. The patient had an uneventful postoperative course. There has been no evidence of recurrence after 12 months of surgery.

DISCUSSION

Primary malignant melanoma is one of the rarest malignant lesions of the breast and accounts for only 0.28% to 3.8% of all reported melanomas.^{3,4} A primary melanoma originating on the female nipple is an extremely rare variant of malignant melanoma. The incidence of nipple and areola melanomas is approximately 12% of all cutaneous melanomas of the breast.⁵ It can present as either parenchymal melanoma without skin involvement or cutaneous melanoma

involving the skin overlying the breast as was in the present case. Malignant melanomas are classified according to the criteria of Clark, which distinguishes the following types: superficial spreading melanoma, nodular melanoma, lentigomaligna melanoma, and acro-lentiginous melanoma.^{4,6} Clinically, symptoms of malignant Melanoma of the Nipple are nonspecific; thus, it is mostly mistaken for more common entities such as Paget's disease, seborrheic keratosis, and benign moles. Mahmoudzadeh et al. reported a rare case of malignant melanoma of the nipple and areola that presented with axillary lymphadenopathy with no involvement of breast skin.⁷



Figure 1: Macroscopic view of the nipple lesion after excisional biopsy.

Although dermoscopy largely contributes to the differential diagnosis of tumors by facilitating the evaluation of melanocytic lesions, highly sensitive diagnostic techniques are required such as exfoliative cytology, core needle biopsy or incisional biopsy. The preferred treatment for melanoma comprises surgical excision with a safety margin around the primary tumor. Lens and his collaborators demonstrated a statistically significant differences in disease-free survival when comparing wide excision groups (margins of 3 to 5 cm) to narrow excision groups (margins of 1 to 2 cm)[8]. Mastectomy offers no advantage over wide local excision of the lesion. Sentinel lymph node biopsy is the standard procedure by which regional lymph node involvement of malignant melanoma is determined, and helps to reduce adverse effects.⁴ In our case, lack of sentinel lymph node equipment, direct axillary lymph node dissection was performed. Systemic adjuvant therapy is indicated for postoperative patients at a high risk of advanced disease development. Prognostic factors of cutaneous melanoma include tumor thickness (the most important), mitotic rate

per square millimeter, tumor-infiltrating lymphocytes, anatomic site of primary melanoma, sex, and histologic regression.^{7,9} Although recent studies have identified several oncogenes associated with melanoma, no adjuvant therapy currently improves the prognosis dramatically, given the potential side effects.

CONCLUSION

Primary melanoma is one of the differential diagnoses of pigmented nipple and areola lesions. Early diagnosis, correct surgical resection and comprehensive adjuvant therapy are the key procedures that may improve the patient survival rate.

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