CASE REPORT

Parotid Cystic Lesion in Amelanotic Malignant Melanoma

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ABSTRACT

A 60-year Brazilian woman, presented with an enlarged lymph node in the neck for one year, and a superficial non-ulcerated lesion was observed in the scalp. Fine needle aspiration and biopsy of the lymph node revealed amelanocytic metastasis, and immunohistochemistry study showed Melan-A / Mart-1 antigen (clone A103 and S-100 protein). The entire suspected area of the scalp was further resected and an amelanotic melanoma without angiolymphatic invasion was diagnosed. Ultrasonography and PET-computed tomography showed hypermetabolic cystic area in the right parotid. Furthermore, aspiration biopsy and surgical samples from parotid cyst confirmed the malignant amelanotic melanoma. Cystic metastases are scarcely reported in parotid gland, and can pose diagnostic challenges.

Key Words: Cystic amelanotic melanoma. Lymph node. Metastasis. Parotid gland.

INTRODUCTION

Malignant melanoma represents 3 - 5% of the skin cancers, but it causes up to 75% of deaths; early detection and prompt treatment of this malignancy is associated with better outcomes.1,2 Diagnosis of amelanotic melanoma (AMM) is usually delayed and the course is more severe.1,2 Parotid lymph node metastasis from AAM of unknown origin is also very uncommon.3 Reports about cystic lesions of parotid gland have included benign and malignant neoplasms as adenocarcinoma, mucoepidermoid and benign mixed tumors, and metastatic melanoma.4 Clinical and pathological challenges may involve the differential diagnosis between primary parotid tumors or lymphatic malignancies, and metastases of tumors within the gland.5,6 Although rarely, primary amelanotic malignant melanoma (AMM) can have a parotid origin.7 Moreover, metastasis of melanoma of the scalp sometimes spread to the parotid lymph nodes.8 Metastatic melanoma often occurs in regional lymph nodes, lung, liver, skin, and brain.9 However, cystic metastasis is an exceedingly rare condition reported in the liver and brain.9

Herein is presented a rare case of intraparotid metastatic melanoma with cystic appearance, which had origin in amelanotic melanoma localised on the frontoparietal region of the scalp.

CASE REPORT

A 60-year Brazilian woman was admitted because of a nodule in the right side of the neck, which was detected one year earlier. Fine needle aspiration of the lymph node revealed low cellularity, plates of polyhedral and stellate epithelial cells with hyperchromatic nuclei, which appeared bulky and bizarre with aspect of plasmacytoid cells. Fine needle aspiration of a right supraclavicular lymph node showed atypical cells with large cytoplasm and eccentric nuclei, some of them elongated and not clustered in groups. Excisional lymph node biopsy revealed metastasis of epithelioid neoplasm. Immunohistochemistry was positive for Melan-A / Mart-1 antigen (clone A103 and S-100 protein), as well as for S-100 protein, characterising metastasis of melanoma (Figures 1A to 1C). Investigation of primary site included normal upper digestive tract endoscopy and colonoscopy. Dermoscopy study of suspected lesions found in the scalp (Figures 1D and 1E) showed accentuated irregular net of vessels, with a pattern consistent with amelanotic melanoma. Surgical enlargement of the procedure on scalp was done and right cervical lymph nodes were removed. Histo-pathology studies did not reveal angiolymphatic invasion, and showed hyperplasia of follicular pattern in a periglandular (parotid) lymph node; hyperplasia of mixed pattern at right cervical levels II-V, and in the right supra clavicular level.

Early in postoperative period, the patient had an abrupt episode of breathlessness and non-productive cough. The computerised tomography with contrast of the chest (CT) detected acute pulmonary embolism affecting the arteries of the lingular and left poster-basal segments (Figure 1F). The patient underwent with success a schedule with heparin and oral anticoagulants, and yielded the INR control ranging between 2 and 3. A PET-CT of entire body showed a hypermetabolic area in the right parotid gland (Figure 2A). Further ultrasonography study detected an intraparotid cystic lesion of 1.5 x 0.9 x 1.1 cm (Figures 2B and 2C). Aspiration of the lesion revealed poorly differentiated malignant cells.
Total right parotidectomy was performed and histopathological studies revealed that metastatic melanoma (Figures 2D and 2E) was the origin of the cystic lesion. The same parotid specimens were tested for cytokeratins (40, 48, 50, and 50.8 kDa) and p63 protein, in addition to calponin, and all the results were negative. The surgical sequels on the scalp gradually improved with clinical management (Figure 2F). After establishment of diagnosis, the patient was referred to treatment at Oncology Section.

DISCUSSION

The case herein reported had cystic parotid metastasis of AMM with primary tumor on the scalp, and the diagnosis was established, based on consistent immunohistochemistry data. She was not earlier concerned about the longstanding growth of the right supraclavicular lymph node. Moreover, the primary amelanotic cutaneous lesion evolved unsuspected. Notwithstanding, the data of fine needle lymph node aspiration established the diagnosis of metastatic melanoma, and the routine to identify the primary site of the tumor was performed. Worthy of note was the role of dermoscopy evaluation of suspected changes on the head, which was followed by excision diagnostic biopsy and further local enlargement procedures. Imaging studies of the salivary gland obtained by PET/CT scan and ultrasonography showed a hypermetabolic lesion with cystic appearance, and it was biopsied before the parotidectomy.

Although metastases to lymph nodes on the parotid region have been commonly reported, the evidence of intraparotid cystic metastasis of AMM can be considered a rare condition. Nasuti et al. reviewed 46 cases of cystic parotid lesions and found one metastatic melanoma. Ogawa et al. reported a rare cystic brain implant of AMM in a 55-year woman. During hospitalisation, this patient had an acute pulmonary thromboembolism involving the artery branches of the lingular and left poster-basal segments. There was neither familial nor personal antecedent of thrombophilic conditions in this case study. Therefore, one major concern would be about the role played by paraneoplastic phenomenon. Marks and Engels studied 1.2 million cancer cases among elderly adults in the United States and found venous thromboembolism (VTE) in 2.5% of cases. There was a 15% higher risk of cancer associated with prior VTE; in melanoma was OR = 1.17; 95% CI, 1.15 - 1.54. However, as the patient herein reported developed acute pulmonary embolism in early postoperative period, the major possibility is: this being a complication of the surgery. Other possible concern in the present case might be about the exceedingly rare occurrence of thrombosis in the intraparotid tumor, that has been found by PET/CT scanning of the gland. In solid tumors, this rare event is often due to direct invasion or neoplastic tissue transported by bloodstream, and may occur associated with bland thrombi. Hypermetabolic images of PET/CT might constitute a useful tool in differential diagnosis; nevertheless, inflammatory and septic thrombosis can also give origin to similar images. This possibility was ruled out by parotidectomy, which showed the presence of malignancy. Therefore, in the present case study both PET/CT images and histopathology findings were consistent with amelanotic malignant melanoma of the scalp with cystic parotid metastasis. Additional concerns in this setting would be the alternative hypothesis of primary intraparotid melanoma, or cystic metastasis of malignant melanoma from unknown primary site.
Thorough examination of the whole body is the best tool for early diagnosis of skin tumors, and immunohistochemistry analysis is required to confirm amelanotic and black melanomas. Early diagnosis and appropriate management will get better clinical responses and outcomes. Therefore, in spite of the inherent weakness of a single case report, this might contribute to enhance the relatively scarce current knowledge about the cystic metastasis of melanoma.

REFERENCES