การแพร่กระจายของ melanoma ชนิดไม่มีเม็ดสีที่ไม่ทราบจุดกำเนิดไปยังต่อมน้ำลายหน้าหู: รายงานผู้ป่วยและการทบทวนวรรณกรรม

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Metastasis of Amelanotic Melanoma of Unknown Origin in the Parotid Gland: A Case Report with Literature Review

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หลักการและวัตถุประสงค์: มะเร็ง melanoma ของต่อมน้ำลายหน้าหูพบได้น้อยมาก ส่วนมากพบเป็นการแพร่กระจายของ melanoma ของผิวหนังบริเวณศีรษะและลำคอหรือไม่ทราบจุดกำเนิด การรักษายังคงเป็นเรื่องท้าทายและการพยากรณ์โรคที่แย่ การศึกษานี้มีวัตถุประสงค์เพื่อรายงานผู้ป่วยที่มีการแพร่กระจายของ melanoma ชนิดไม่มีเม็ดสีที่ไม่ทราบจุดกำเนิดไปยังต่อมน้ำลายหน้าหู

วิธีการศึกษา: รายงานผู้ป่วยรายเดียว

ผลการศึกษา: ผู้ป่วยเพศชายอายุ 61 ปี มาด้วยอาการมีก้อนที่ต่อมน้ำลายหน้าหูซ้ายมา 1 ปี ตรวจร่างกายและเอกซเรย์คอมพิวเตอร์พบก้อนแข็งมีตำแหน่งอยู่ที่ส่วนตื้นของต่อมน้ำลายหน้าหูซ้าย ผลวินิจฉัยทางพยาธิวิทยาหลังจากผ่าตัดต่อมน้ำลายหน้าหูส่วนตื้นออก เป็นมะเร็ง melanoma ชนิดไม่มีเม็ดสีที่น่าจะเป็นการแพร่กระจายมาจากมะเร็งตำแหน่งอื่น มีการตรวจร่างกายทุกระบบและตรวจเพทซีทีเพื่อหาเนื้องอกที่เป็นจุดกำเนิดและการแพร่กระจายไปตำแหน่งอื่นๆ ผลการตรวจไม่พบเนื้องอกที่เป็นจุดกำเนิดแต่สงสัยมะเร็งแพร่กระจายที่ต่อมน้ำเหลืองที่คอด้านขวา ผู้ป่วยได้รับการผ่าตัดต่อมน้ำเหลืองที่คอทั้งสองข้าง ผลวินิจฉัยทางพยาธิวิทยาไม่พบการแพร่กระจายของมะเร็งที่ต่อมน้ำเหลืองที่คอ หลังผ่าตัดผู้ป่วยได้รับการฉายแสงปริมาณรังสีครบ โดยมีความพึงพอใจผลการรักษาทั้งด้านการทำงานและความสวยงามโดยไม่พบอาการผิดปกติของการเป็นซ้ำของมะเร็งในระยะเวลาติดตาม 30 เดือน

สรุป: การแพร่กระจายของ melanoma ชนิดไม่มีเม็ดสีที่ไม่ทราบจุดกำเนิดไปยังต่อมน้ำลายหน้าหูพบได้น้อยมากและการพยากรณ์โรคแย่ ดังนั้นการตรวจพบในระยะแรกของ

Background and Objectives: Malignant melanoma of parotid gland is an extremely rare, almost case represent metastases from a head and neck melanoma or unknown primary origin. The treatment is still challenging and the prognosis is very poor. The aim of this study was to present a rare case of a metastasis of an amelanotic melanoma of unknown origin in the parotid gland.

Method: A single case report.

Results: A 61-year-old male present with painless mass at left parotid gland for 1 year, physical examination and CT scan showed solid mass located at superficial lobe of left parotid gland. The pathological diagnosis after performed superficial parotidectomy was amelanotic malignant melanoma, possibility of metastasis melanoma from other primary lesion. Complete physical examination and PET-CT were performed to find out primary tumor and other metastatic lesion, the results showed no primary origin but highly suspicious of right cervical lymph node metastasis. Patient underwent bilateral modified radical neck dissection and pathological diagnosis was no tumor metastasis. Patient received adjuvant radiotherapy(60 Gy) with satisfied functional and aesthetic outcome without signs or symptoms of recurrence for 30 months

Conclusion: Metastatic parotid melanoma from unknown primary tumor is rare phenomenon and prognosis is worse. There is need of early detection, adequate and aggressive treatment in view of poor prognosis. Multidisciplinary treatment approach for adequate local control and improved survival as well as quality of life.

มะเร็งและการรักษาที่มากเพียงพอเป็นสิ่งควรทำเนื่องจากพยากรณ์โรคที่แย่ และการรักษาด้วยสหสาขาวิชาชีพเพื่อการรักษาเฉพาะที่ที่เหมาะสมและทำให้อัตราการอยู่รอดดีขึ้นรวมถึงคุณภาพชีวิตของผู้ป่วย

ศรีนครินทร์เวชสาร 2561; 33(6): 609-14. • Srinagarind Med J 2018; 33(6): 609-14.

Introduction

Primary malignant melanoma of parotid gland is an extremely rare and salivary gland melanomas are always appear to represent metastases from a head and neck cutaneous primary melanoma[1], or unknown primary origin can be occur. Computerized tomography, magnetic resonance imaging and fine-needle aspiration cytology (FNAC) are useful preoperative diagnostic and staging procedure. The treatment of clinical metastasis to the parotid from cutaneous melanoma require excision. A superficial parotidectomy is indicated for those lesions isolated to the superficial lobe and lesions involving the deep lobe or the facial nerve require a total parotidectomy. The neck should also be dissected for clinical parotid involvement, regardless of clinical involvement of the neck nodes, because of the high rate (27%) of occult neck disease. Adjuvant radiotherapy may also be given in selected patients. Prognosis is generally very poor, and only few patients survive for a long period following treatment. Metastatic spread of malignant melanoma has also been reported to regional lymph nodes, lung, liver, brain and bone due to satellite formation, angiolymphatic invasion and submucosal spread.

Herein is present a rare case of a metastasis of an amelanotic melanoma of unknown origin in the parotid gland.

Case presentations

A 61-year-old male presented with painless mass in left parotid region for one year and recently grew rapidly. Physical examination revealed a mobile mass with size 3.5*3 cm, skin over the swelling is smooth, shiny, slightly redness and non adherent to mass. Clinically facial nerve function was intact with no cervical lymphadenopathy. The patient's computed tomography (CT) indicated a lobular-contoured, 3.5*2 cm solid mass lesion with heterogeneous contrast enhancement in the anterior lobe of the left parotid gland (Figure 1A). A fine needle aspiration biopsy revealed non-diagnostic. We did a superficial left parotidectomy with preservation of the facial nerve and cervical lymph node sampling. Intraoperative finding revealed a solid mass located at superficial lobe of parotid gland, size 3.5*2 cm with enlarged multiple left cervical lymph nodes level I, size 0.5-0.8 cm.

Histopathological results showed malignant round to oval epithelioid cells scattering in intraparotid lymphoid tissue or lymph nodes with focal necrosis. The results of an immunohistochemical analysis revealed the neoplastic cells stain positive with Melan A, S100-protein, vimentin and HMB-45, panCK negative. Excisional lymph node biopsy revealed negative for malignancy (0/4 nodes) and soft tissue deep margin biopsy revealed no malignancy seen. (Fig 2)

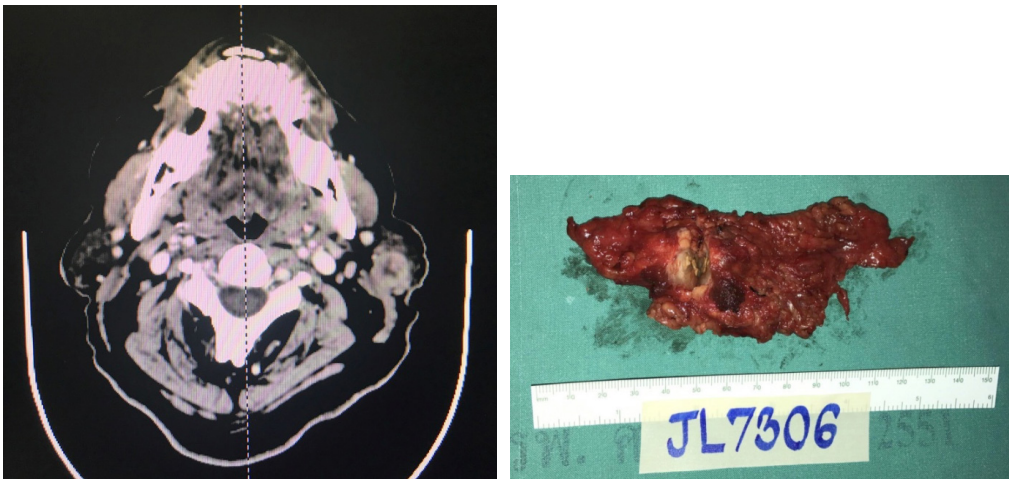
The pathological diagnosis was amelanotic malignant melanoma, possibility of metastasis melanoma from other primary lesion.

Because the parotid lesion was most likely a secondary metastasis from primary melanoma. The investigations to identify the primary tumor site. The patient was examined by dermatologist, ophthalmologist and otolaryngologist, which included flexible panendoscopy, chest radiograph and Positron emission tomography-computed tomography (PET-CT) also for checking other metastatic lesion. No primary origin of the melanoma was detected. PET-CT revealed area of FDG uptake without definitive abnormal mass at left parotid region beneath surgical bed which suggests post-operative inflammation from recent surgery and 0.5

cm lymph node at right cervical region(level IIb) with SUV max of 3.97 which highly suspicious of cervical lymph node metastasis, no other distant metastasis. (Fig 3)

Then the patient underwent bilateral modified radical neck dissection in the second operation. Histopathological results showed no metastasis of all lymph nodes, bilaterally.

The definitive diagnosis was metastasis from an amelanotic malignant melanoma of unknown origin. The early postoperative course was uneventful. The patient received adjuvant radiotherapy (60 Gy in 30 fractions over 6 weeks). The patient was satisfied with the aesthetic result and remains in continuous clinical and imaging surveillance without signs or symptoms of recurrence for 30 months.



(a) (b)

Figure 1 (a) Lobular-contoured solid mass in the anterior lobe of the right parotid gland (4 × 2.5 cm in size) in the patient's computed tomography (CT). (b) The lesion invading temporozygomatic and buccal branches of the facial nerve and originating from the superficial lobe of the parotid gland.

Discussion

Malignant melanoma represents approximately 0.7% of all malignant neoplasms within the parotid gland[1,2]. Primary malignant melanoma of the parotid gland appear to be associated with lymph node metastasis in and around the gland from a cutaneous primary in the head region[3]. Takeda et al. recently documented the existence of benign melanocytes in the basal and suprabasal layers of a parotid interlobular duct in an autopsy case[4-6], these findings demonstrate that the occurrence of malignant melanoma in the parotid gland as a primary lesion is possible[5-8].

Greene and Bernier also noted that primary parotid melanomas were not located in lymph nodes but were infiltrative and poorly demarcated tumors[9]. However, many of our primary cases of parotid malignant melanoma revealed the malignant melanoma within on intraparotid lymph node. Regression of a primary cutaneous melanoma by autoimmune surveillance is known to occur[9,10]. Two basic criteria to rule out primary malignant melanoma are histopathologic demonstrate of primary malignant melanoma in the gland and inability to demonstrate any other primary tumor origin[11-13].

Woodward et al. proposed the following criteria for the diagnosis of a primary parotid malignant melanoma[14]: the predominant tumor mass or bulk should be situated within the parotid gland, there is no identifiable lymph node tissue present in the mass, there is no evidence of malignant melanoma elsewhere after diligent search of eyes, skin, nose, pharynx, mouth, oesophagus, anogenital region and meninges, and there is no evidence of previous excisions of an

malignant melanoma or progression of a pigmented lesion.

Metastasis involving intraparotid lymph nodes tends to have a well-demarcated interface between the lymph node capsule and the adjacent salivary gland tissue in contrast to supposed primary melanomas, which tend to be infiltrative, poorly demarcated lesions[15,]. However, such an infiltrative pattern of salivary gland involvement does not necessarily indicate a primary tumor. Rarely, primary melanomas may regress and may not be subsequently as readily identifiable[15]. Although the majority of metastatic of melanoma to the parotid gland arise from primary sites in the head and neck regions includes forehead, anterior frontal and temporal region, eyelids and conjunctiva, lacrimal gland, anterior ear, cranial vault and posterior cheek regions[15,16]. Occasionally metastasis from unusual noncutaneous sites, distant from the head and neck can give rise to tumor in the parotid. The literature seems divides as to whether the prognosis for lesions with an unknown primary is better than or the same as the prognosis for tumors in which the primary is known[15,16].

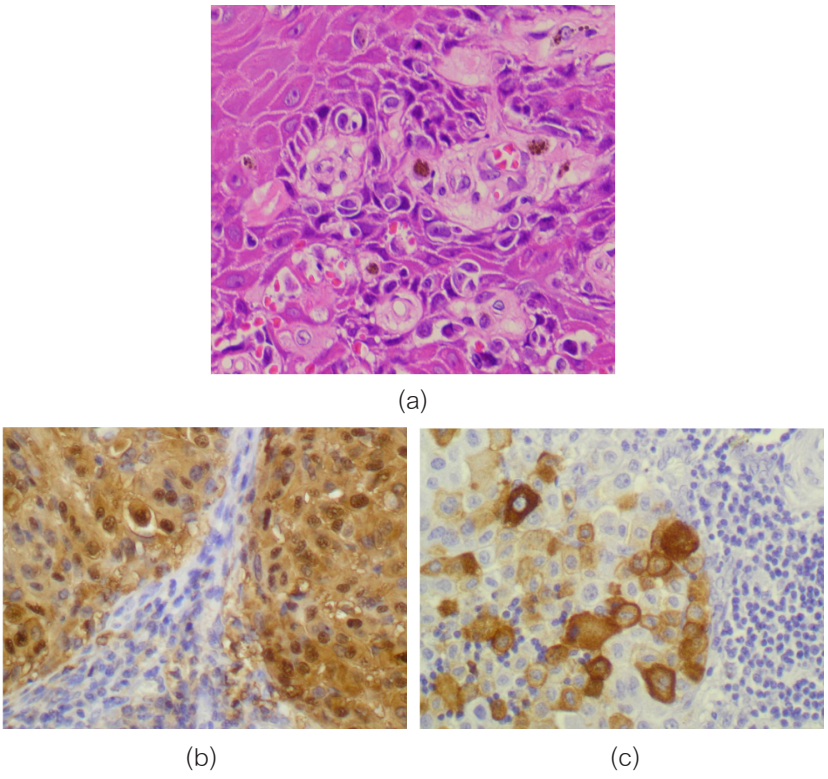
Prayson and Sebek. reported that after squamous cell of head and neck approximately 40%, cutaneous melanoma is the second most common metastatic tumor of the parotid gland[17]. Breslow thickness is most important prognostic indicator for malignant melanoma. The risk of regional metastasis proportional to Breslow thickness[17].

The recommended treatment plan for parotid malignant melanoma includes an assiduous search for a dermal, mucosal or ocular primary malignant melanoma[18]. Superficial parotidectomy with neck dissection and radiotherapy is the treatment of choice for superficial lobe involvement in the case of metastatic parotid cancers and there is no addes advantage in terms of survival with total parotidectomy[8,16,18].

Whereas others recommend total parotidectomy because the possibility of an occult invasion in the deep lobe in the case of superficial lobe metastasis[15,19,]. Neck dissection should always be performed because of the high incidence of hidden metastases in these nodal groups[16]. The first echelon of drainage for cutaneous melanoma of the scalp or face is to intraparotid lymph nodes. Sentinel node biopsy is the proposed procedure for identification of these first echelon nodes, through a combination of lymphoscintigraphy and injection of methylene blue dye. The direction of drainage is determined by dynamic imaging and mapped by lymphoscintigraphy[16].

After parotidectomy, postoperative radiation therapy is indicated for patients with melanoma that has metastasized to cervical lymph nodes and to the parotid gland[16,18]. In this type of tumors, adjuvant radiotherapy is not part of a regular treatment protocol but it is recommended for high risk patients, based on grade, stage and margin of excision to improved local control of the disease[12,16].

Histologically, they are characterized by being a multinodular lobulated tumor, with cells that show large nuclei, prominent nucleoli and plentiful eosinophilic cytoplasm. Within the tumor cells, brown granular pigment, melanosomes are helpful diagnostic clues. Tumors in which a spindle cell phenotype is predominant may be difficult to distinguish from spindle cell carcinomas, or if neuromelanin pigmentation is not evidence as in amelanotic malignant melanoma[15,16,20]. In such cases, immunohistochemistry provides a valuable tool for ensuring a correct diagnosis. The standard melanoma immunohistochemistry is characterized by S100 protein, melan A and HMB-45 positivity[10,15,16].

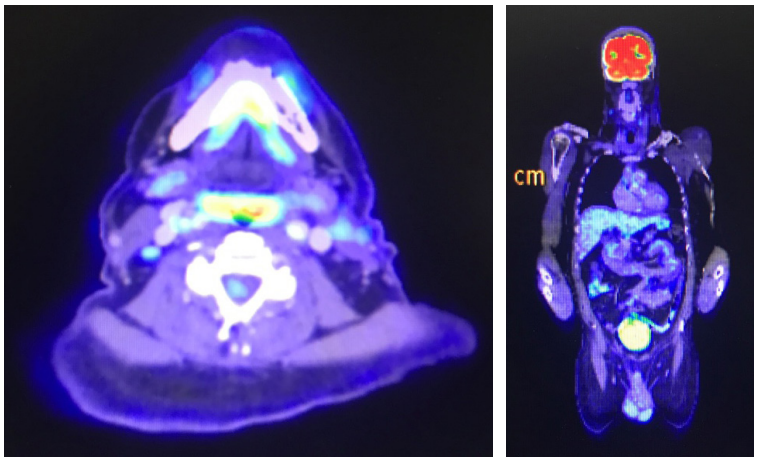


(a)

(b) (c)

Figure 2 Microscopic examaination(a) section show malignant round to oval epithelioid cells scattering in intraparotid lymphoid tissue.(b) Strong stain for S-100 of atypical cells with excessive cytoplasm and a large nucleus(400x HE). (c) Stain for HMB-45,the irregular grasping of the tincture HMB-45 can be seen in the atypical cells(400xHE)

The review of the cases presented in this study and of the literature suggests that the diagnosis is metastatic amelanocytic malignant melanoma of parotid gland with regressed primary tumor in the head and neck area. Prognosis, even with treatment appear to be generally poor and high incidence of local recurrence.



(a) (b)

Figure 3: (a) PET-CT examination showed area of FDG uptake at right cervical lymph node(level IIb), highly suspicious of metastasis (b) no definitive abnormal lesion or other distant metastasis.

Conclusion

Metastatic parotid melanoma from unknown primary tumor is a rare phenomenon and prognosis is worse. Prognosis is influenced by several factors, particularly stage and tumor grade. The diagnosis protocol suggests that a histological diagnosis of a melanoma should always be followed by a thorough search for primary or metastatic disease. There are no standard guidelines for management due to rarity of the event. There is need of early detection, adequate and aggressive treatment in view of poor prognosis. Multidisciplinary treatment approach is needed for adequate local control and improved survival as well as quality of life.

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