MALIGNANT BLUE NEVUS OF THE PAROTID GLAND: A CASE REPORT

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Abstract: Background. Malignant blue nevus is a highly aggressive tumor arising from a background of benign blue nevus. Extensive review of the medical literature revealed a few reported cases of this transformation from cutaneous origin. We report the first case of blue nevus of the parotid gland and its malignant transformation within this gland.

Methods. A 62-year-old woman presented to our clinic with sudden onset parotid mass. After a superficial parotidectomy, histologic examination of the specimen was performed. Features compatible with blue nevus with focal region of atypical mitotic activity were evident. The diagnosis of malignant blue nevus was confirmed by immunohistochemical studies.

Results. We report the first case of malignant transformation of blue nevus within the parotid gland.

Conclusions. We found this lesion to be highly aggressive and to have metastasized shortly after diagnosis.

Keywords: blue nevus; parotid gland; malignant

Blue nevus is a melanocytic tumor containing dendritic and spindled melanocytes. These common benign lesions are caused by the migration of melanocytes from neural crest and usually present as bluish black solitary nodule in dermis and subcutaneous tissues.1 Blue nevi have also been reported in oral mucosa, maxillary sinus, eye, bronchus, prostate, cervix, and lymph nodes.1,2

Malignant blue nevus is an extremely rare, highly aggressive tumor arising in the background of blue nevus.1–3 A few cases have been described in the medical literature, and all have been from cutaneous origins.4,5 We report the first case of blue nevus of the parotid gland and its malignant transformation within the gland in the English-language literature.

CASE REPORT

A 62-year-old woman presented to the family physician’s office with a left parotid gland swelling of sudden onset. The swelling therapy temporarily subsided with oral antibiotics; however, a sialogram performed shortly after raised the possibility of a mass within the parotid gland. She was referred to our clinic for further assessment and therapy. She denied any pain at rest or while eating and had no other head and neck symptoms. A small mass approximately 2 cm in diameter was noted in the postero-inferior aspect of the left parotid gland. There was also a blue discoloration in
the postauricular region extending down to neck measuring 8 cm in length. According to the patient, this lesion had been present since her teenage years without any recent changes in length or shape.

A fine-needle aspirate of the parotid mass was arranged; however, because of the low cell count of the specimen, an inconclusive result was obtained. A biopsy of the discolored postauricular skin was noted as hemosiderin deposits within the subcutaneous tissue. We decided to perform a superficial parotidectomy for both diagnostic and therapeutic purposes. Upon elevation of the skin flaps, a deeply infiltrative blue discoloration of the surgical field, including parotid gland, facial nerve, as well as greater auricular nerve, was noted (Figure 1). Histologic examination of the specimen revealed heavily pigmented spindle cells compatible with blue nevus with focal regions demonstrating loss of cellular architecture, atypical mitotic activity, prominent and pleomorphic nuclei, as well as extensive perineural invasion (Figure 2). Trabecular pattern, perivascular cuffing, nuclear palisading, and pseudo-rosette formations were not present. Immunohistochemical studies revealed a strong positive reaction to vimentin, Mart-1, HMB45, and S-100, supporting the diagnosis of malignant blue nevus.

Initial investigation revealed that the disease was localized to the left parotid region with possible invasion of temporal bone and parotid lymph nodes. Various treatment modalities were discussed with the patient, including resection followed by radiation therapy and adjunct chemotherapy. The patient elected not to have any treatment because of the associated morbidity of the therapies and the poor prognosis of the disease. Hepatic metastases developed 6 months after the diagnosis was made; she died shortly afterward. The older age and short survival of this patient are also supportive of the diagnosis of malignant blue nevus. In comparison, cutaneous malignant melanocytic neurocrestic tumors occur at a younger age and have a protracted clinical course.\textsuperscript{6,7}

**DISCUSSION**

Blue nevus is a common benign tumor of dermal melanocytes. Histologically, these lesions have spindled dendritic melanocytes with abundant melanin aligned with bundles of collagen fibers.

Malignant blue nevus is defined as the presence of cytologically malignant dermal melanocyte in the background of blue nevus. Histologic findings suggesting malignancy include atypical...
mitotic figure, nuclear pleomorphism, expansive destructive growth, and spontaneous necrosis. These lesions have been reported to arise from both congenital and acquired variants of blue nevi. The large majority of these lesions occur in the scalp, but they have also been reported in the buttock, arm, foot, and chest. Review of the reported cases revealed the aggressive nature of malignant blue nevus with 7% to 80% of patients demonstrating metastatic disease at the time of diagnosis to lymph nodes, liver, and lung and a high 1-year mortality rate.

CONCLUSION

We report the first case of blue nevus in the parotid gland and its malignant transformation in extracutaneous tissue in the English-language literature. We found this lesion to be highly aggressive and to have metastasized to liver shortly after initial diagnosis.

REFERENCES