Diagnosis of granular cell tumour of the upper lip using polymer HRP detection system

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ABSTRACT

Oral granular cell tumour is a rare soft tissue tumour, can develop on any skin or mucosal surface. Granular cell tumors can affect all parts of the body; however, the head and neck areas are affected 45% to 65% of the time. Of the head and neck cases 70% of lesions are located intraorally (tongue, oral mucosa, hard palate). The next most common location that lesions are found in the head and neck area is the larynx(10%).[1] In patients 30% of cases have been reported to occur in the lip, but this presentation in adults is extremely rare. The present study is concerned a case of oral granular cell tumour in a 60 year-old female, located in the upper lip. Histopathological examination revealed granular cells which stained positively for S-100 protein; a finding supportive of a neural origin. A history of trauma was elicited in this case, and the lesion was treated with surgical excision.

Keywords: Granular Cell Tumour; Oral Mucosa; polymer HRP

INTRODUCTION

Granular cell Tumour is uncommon benign soft tissue neoplasms, characterized microscopically by large polygonal cells with abundant pale eosinophilia granular cytoplasm[2]. Granular cell tumors can affect all parts of the body; however, the head and neck areas are affected 45% to 65% and neck cases 70% of lesions are located intraorally (tongue, oral mucosa, and hard palate). Granular cell tumors are also found in the internal organs, particularly in the upper aero digestive tract. It has been reported that 30% of cases occur in involve in lips. Presentation of granular cell tumor in the lip of an adult is extremely rare. In this study we report the occurrence of an oral granular cell tumor affecting the upper lip in a 60 year-old female patient.

EXAMINATION REPORT

A 60 year-old Indian female, presented with painless growth, asymptomatic, non-movable, sub mucosal lump in the over upper lip of approximately three month's duration. The lesion measured 2.0 x 1.5 x 0.6 cm, No specific history could be elicited, patient suffering from diabetes otherwise she was healthy. Lesion on skin and vermilion of upper lip shows scaly hyperkeratotic center and erythematous periphery.(Fig. 1.1). Clinically the lesion was easily separated from the overlying mucosa, but was intimately involved with the underlying musculature of the lip. The lesion was surgically excised under local anesthesia, soft tissue surgically separated goes through biopsy and suggestive feature of granular cell Tumour was found. For confirmation of granular cell tumor Histopathological examination revealed with S-100 using polymer HRP detection system. The granular cells were uniformly positive with S-100 (Fig.1.2/ table. 1.1), Morphological and IHC features are consistent with benign Granular cell Tumour. The final diagnosis was a benign granular cell tumour.

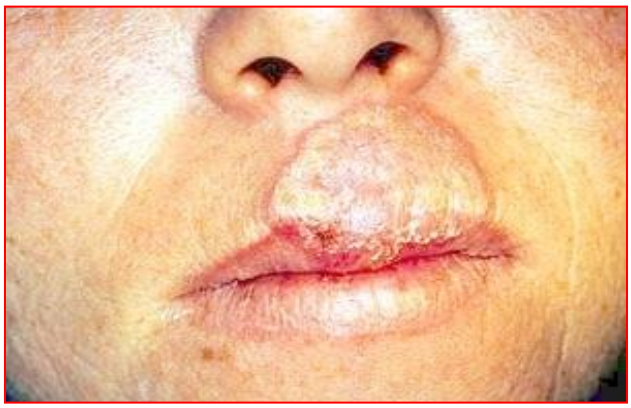

Figure 1.1: Lesion on skin and vermilion of upper lip shows scaly hyperkeratotic center and erythematous periphery.

Citation:- *dentistry.uiowa.edu*

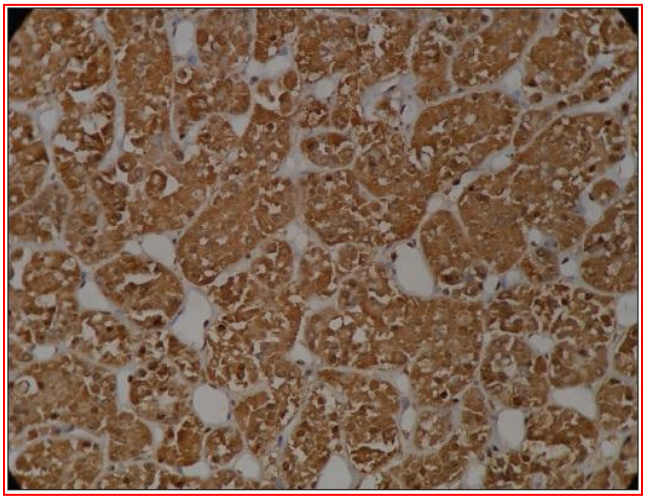

Figure 1.2: Granular cells stained positive with S-100
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Result	Score
Non Immunoreactive	0
Immunoreactive In 1-25% Cells	1+
Immunoreactive In 26-50% Cells	2+
Immunoreactive In 51-75% Cells	3+
Immunoreactive In 75-100% Cells	4+

Table 1: Immunoreactive score of lesional cells with S-100 (result based on lab analysis)

DISCUSSION

The usual presentation is of slow growing behavior, forming a polygonal accumulation of secondary lysosomes in the cytoplasm. Granular cell tumors are typically solitary and are rarely larger than three centimeters. This type of tumor has been found to be both benign and malignant, although malignancy is rare and comprises only 2% of all granular cell tumors [3]. The colour may vary from characteristically pink to occasionally yellow in appearance with normal overlying epithelium. Oral granular cell tumour occurs in a range of patients from children to the elderly, with the mean age of development between the fourth and sixth decades of life, and are rare in the first decade. Studies have shown a predilection for females of Granular cell tumours often localized nuclear and cytoplasmic location and main use is in the evaluation of peripheral nerve sheath and melanocytic tumors. The close relationship with muscle fibres was evidenced in this case both during excision of the lesion, and on histopathologic examination. However, the histogenesis of these lesions has repeatedly been demonstrated to be derived from Schwann cells and melanocytes, all tumors derived from these cells are positive for s-100 and cause granular cell tumour. In this case, the lesion was Immunoreactive in 75-100% Cells 4+ for S-100. The primary method for treatment is surgical, not medical. Radiation and chemotherapy are not needed for benign lesions and are not effective for malignant lesions. In some cases though, multiple granular cell tumours have been reported to occur at sites distant from that of initial surgery, and reactive granular cell lesions have also been reported in sites of prior surgery, particularly involving smooth muscle, with a putative histiocytic origin.

CONCLUSION

In this report, we find out that histogenesis of these lesions has repeatedly been demonstrated to be derived from Schwann cells and melanocytes, all tumors derived from these cells are positive for s-100 and cause granular cell tumour. The aim of this study is to find out the Immunoreactive of lesional cells against S-100.

↓ REFERENCES

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