CASE REPORT
DOI: 10.26650/Tr-ENT.2024.1561306
The Turkish Journal of Ear Nose and Throat 2024;34(4):145-148

Oral Chondrolipoma: A Rare Case Report

Shubhangi Mani[1], Manas Bajpai[2], Saurabh L. Sabnis[2]

[1]Paravara Institute of Medical Sciences, Rural Dental College, Department of Orthodontics, Loni, India
[2]Paravara Institute of Medical Sciences, Rural Dental College, Department of Oral Pathology and Microbiology, Loni, India

ORCID ID: S.M. 0009-0008-4160-6857; M.B. 0000-0001-6168-3069; S.L.S. 0000-0001-7646-3499

Citation: Mani S., Bajpai M., Sabnis S. L. Oral Chondrolipoma: A Rare Case Report. Tr-ENT 2024;34(4):145-148. https://doi.org/10.26650/Tr-ENT.2024.1561306

ABSTRACT

Chondrolipoma is a rare histological variant of lipoma characterised by the formation of mature hyaline cartilage along with adipose tissue. Chondrolipomas are rare in the oral cavity, with very few cases reported to date. Intra-orally chondrolipoma have been reported most commonly in the tongue, followed by the lower lip, vestibule, and floor of the mouth. Because of the very few cases of chondrolipoma reported in the oral cavity, there is a paucity of information regarding their biological behaviour and clinical outcome. We report a rare case of oral chondrolipoma occurring on the right maxillary attached gingiva; the lesion was initially diagnosed as fibroma. Histopathological examination rendered the diagnosis of chondrolipoma.
Keywords: Lipoma, chondrolipoma, hyaline cartilage, gingiva

INTRODUCTION

Lipomas are benign, slow-growing, mesenchymal tumours of adipose tissue that are histologically characterised by sheets of mature white fat cells separated by fibrous septa (1). Lipomas can occur anywhere in the body; 20% of the lipomas have been reported in the head and neck region; they are exceedingly rare in the oral cavity, with only 1%–5% of reported cases (2). Clinically, lipomas are benign, well-circumscribed, asymptomatic, and slow-growing lesions. Histopathologically, they comprise of sheets of mature adipocytes with occasional secondary mesenchymal tissue. Numerous histopathological subtypes of lipomas have been reported in the literature based on the secondary mesenchymal tissue, i.e., fibrolipoma, osteolipoma, myxolipoma, spindle cell lipoma, sialolipoma, myolipoma, angiolipoma, chondroid lipomas, and chondrolipoma (1-3). Chondrolipomas are characterised by mature hyaline cartilage tissue underlying the sheets of mature adipocytes (4).

CASE REPORT

An otherwise healthy 44-year-old male patient reported to our institute for the evaluation of a painless, localised growth on his left upper back region of the jaw from the last year. The swelling was initially small and gradually reached this size. The family history, past medical history, and personal history of the patient were non-contributory to the presenting symptoms. Intra-oral examination of the patient revealed a yellowish-white dome-shaped growth extending from the attached gingiva of tooth number 24 and extending towards the alveolar mucosa, measuring about 3 × 2 cm (Figure 1). No signs of pus discharge or sinus formation were noted in the lesion. On palpation, it was found to be soft and movable. The cervical lymph nodes were non-palpable.

The panoramic radiograph revealed that the growth was superficial and no bone loss was noted (Figure 2). The lesion was completely removed under local anaesthesia, and the gross tissue was sent to the department of oral pathology and microbiology for the microscopic evaluation (Figure 3). The haematoxylin and eosin-stained section revealed a well-capsulated tissue mass made up of sheets of adipocytes divided by fibrous tissue septa (Figure 4a). A focus of mature hyaline cartilage was noted along with the adipocytes; the metaplastic cartilaginous tissue was surrounded by spindle-shaped cells. The connective tissue stroma was fibrocellular (Figure 4b). On the basis of the histopathological features, the final diagnosis of chondrolipoma was made. No recurrence was noted in the

Corresponding Author: Manas Bajpai **E-mail:** drmb1987@gmail.com
Submitted: 04.10.2024 • **Revision Requested:** 04.11.2024 • **Last Revision Received:** 24.12.2024 • **Accepted:** 24.12.2024 • **Published Online:** 31.12.2024

6-month follow-up period. An informed consent of the patient was obtained for the publication purpose.

DISCUSSION

Lipoma is considered as benign, slow-growing mesenchymal tumours of adipose tissue origin. They are the most common mesenchymal tumours of the head and neck, but are rare in the oral cavity (3-5). They can occasionally be associated with one or more secondary mesenchymal elements (6).

Chondrolipoma is a rare histopathological subtype of lipoma, characterised microscopically by the formation of mature hyaline cartilage with the sheets of mature adipocytes (5, 6). An exhaustive literature review revealed 18 cases of oral chondrolipoma reported in the English literature.

Figure 1: Clinical picture of the lesion

Intraorally, the most common site for oral chondrolipoma is the tongue, followed by the lower lip, floor of the mouth, and vestibule (4-6). McAndrew and Greenspan reported the first case of oral chondrolipoma in 1976 in a 72-year-old female in the lower lip (7). No case of chondrolipoma has ever been reported in the gingiva; hence, the present case is the first report of chondrolipoma in the gingiva to the best of our knowledge.

Clinically, chondrolipoma show features similar to their conventional counterparts; they are usually asymptomatic and slow-growing tumours (3, 4). An exhaustive literature review revealed that chondrolipomas have a wide peak of occurrence from 14 years to 72 years, with a mean age of 51 years (6). Oral lipomas are more common in males than in females; chondrolipoma, too, have shown a preference for males (2, 3, 8). Intra-orally, conventional lipomas have been reported most commonly in the buccal mucosa; however, chondrolipoma have a strong preference for the tongue, but contrary to their conventional counterparts, no case of oral chondrolipoma has been reported in the buccal mucosa (6). Chondrolipomas are diagnosed microscopically because of the presence of mature adipocytes with mature hyaline cartilage tissue; however, the histogenesis of this neoplasm is still enigmatic (6, 8). Numerous hypotheses have been proposed to explain the formation of cartilage in a tumour which is primarily adipocytic in origin (Figure 5).

Histopathologically, chondrolipoma closely resemble chondroid lipoma, an uncommon variant of lipoma characterised by immature lipoblast along with cartilage tissue formation. Chondroid lipoma is considered a pseudosarcomatous entity that imitates malignancies of the adipose and chondroid tissues (9). The treatment modality for chondrolipoma is surgical excision of the tumour; no recurrence has been reported in the literature to the best of our knowledge (10, 11).

Figure 2: Panoramic radiograph of the patient

CONCLUSION

Chondrolipomas are an unusual variant of lipoma characterised histologically by mature adipose tissue with hyaline cartilage formation. The histogenesis of these tumours is not clear; several theories have been proposed to explain the formation of cartilage in an adipose tissue tumour. This case is the first report of chondrolipoma in the gingiva.

Figure 3: Gross specimen

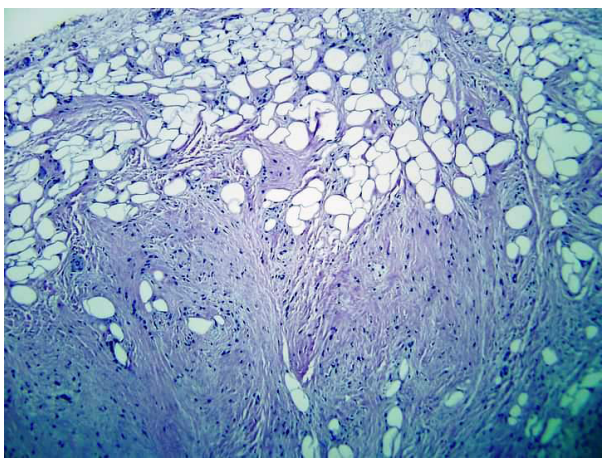

Figure 4a: Encapsulated tissue mass made up of sheets of mature adipocytes lined by fibrous septa. (Haematoxylin and Eosin staining (10x)

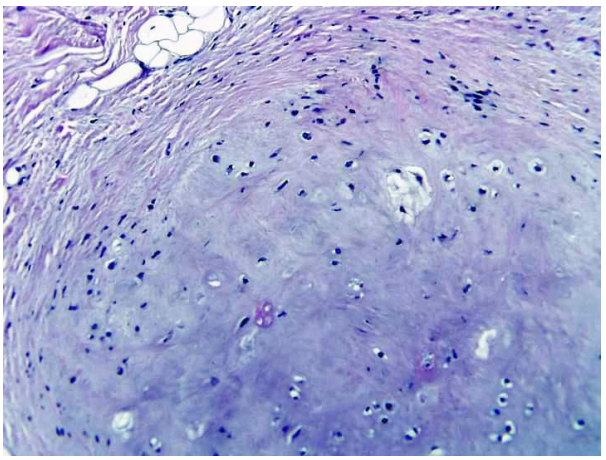

Figure 4b: Hyaline cartilaginous tissue surrounded by mature adipocytes(Haematoxylin and Eosin staining (40x))

Informed Consent: Written informed consent was obtained from patient who participated in this study.

Peer Review: Externally peer-reviewed.

Author Contributions: Conception/Design of Study- S.M., M.B., S.L.S.; Data Acquisition- S.M., M.B., S.L.S.; Data Analysis/ Interpretation- S.M., M.B., S.L.S.; Drafting Manuscript- S.M., M.B., S.L.S.; Critical Revision of Manuscript- S.M., S.L.S.; Final Approval and Accountability- S.M., M.B., S.L.S.; Technical or Material Support – M.B.; Supervision- S.M., S.L.S.

Conflict of Interest: The authors have no conflict of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

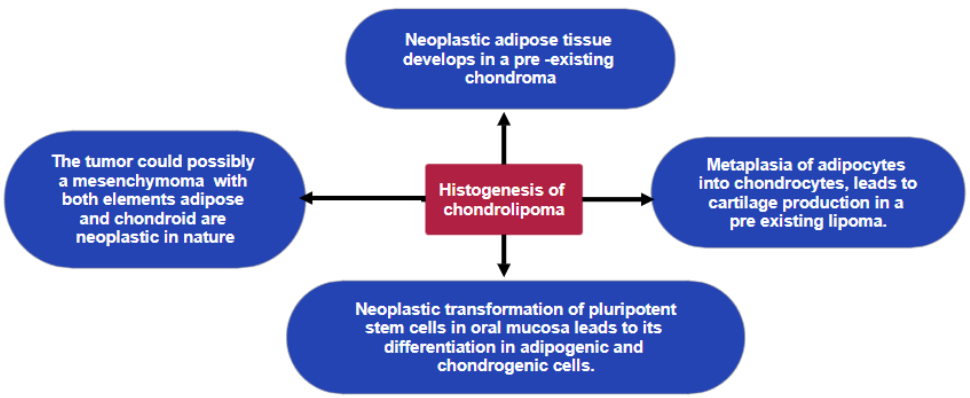

Figure 5: Possible hypotheses to explain the histogenesis of chondrolipoma

REFERENCES

1. Allard RH, Blok P, van der Kwast WA, van der Waal I. Oral lipomas with osseous and chondrous metaplasia; report of two cases. J Oral Pathol 1982;11(1) :18-25.
2. Bajpai M, Arora M, Chandolia B. Prevalence of oral lipomas in Indian population: An institutional retrospective study of 12 years and analysis of 49 published cases from 1976 – 2017 reported in Indian patients. Eur J Gen Med 2016;13(3):42-6.
3. Shabbir F, Greenwood M. Chondrolipoma presenting as a lump on the lateral tongue. Dent Update 2011;38(3):188-90.
4. Raj V, Dwivedi N, Sah K, Chandra S. Chondrolipoma: Report of a rare intra oral variant with review of histiogenetic concepts. J Oral MaxillofacPathol 2014;18(2):276-80.
5. Nonaka CF, Miguel MC, de Souza LB, Pinto LP. Chondrolipoma of the tongue: A case report. J Oral Sci 2009;51(2):313-6.
6. Goel G, Khadilkar UN, Kumar S. Chondrolipoma of tongue. Kathmandu Univ Med J 2008;6(24):505-7.
7. Hietanen J, Makinen J. Chondrolipoma of the tongue. A case report. Int J Oral Maxillofac Surg 1997;26(2):127-8.
8. McAndrew PG, Greenspan JS. Lipoma of lip with cartilage formation. Br Dent J 1976;140(7):239-40.
9. Szudrowicz Z, Jakobi-Roz H. Chondrolipoma of the lip. A case report. Pol J Pathol 1995;46(1):55-6.
10. Fujimara N, Enomoto S. Lipoma of the tongue with cartilaginous change: A case report and review of the literature. J Oral Maxillofac Surg 1992;50(9):1015-7.
11. Maes A, Eulderink F. Chondrolipoma of the tongue. Histopathology 1989;14:660-2.