

Yellow lesions of the oral cavity - A short review

Dr.RyhanathGulshan.F, Dr.N.Aravindh Babu, Dr.K.M.K.Masthan

Post graduate student, Department of Oral Pathology and Microbiology

SreeBalaji Dental College and Hospital

Bharath Institute of Higher Education and Research

gulshanfareed@gmail.com

ABSTRACT

The colour of a lesion is because of its nature and its histological substratum. Oral cavity lesions have been classified according to their colour in: white, red, white and red, bluish and/or purple, brown, grey and/or black lesions to ease its diagnosis. The interpretation of the lesions by its colour is the first step to diagnosis. Clinical diagnostic skills and good judgment forms the key to successful management of yellow lesions of the oral cavity.

INTRODUCTION

Yellow lesions of the oral cavity constitute a common group of lesions that are encountered during routine clinical dental practice. The changes in colour have been used to register and classify mucosal and soft tissue pathology of the oral cavity¹. Yellow lesions have a varied prognostic spectrum. The yellowish colouration is caused by lipofuscin which is the pigment of fat. It may also be caused due to others such as accumulation of pus, aggregation of lymphoid tissue, exudation of serum, degeneration of blood pigments, lipid containing structures, neoplasms and extrinsic stains. Most of them are harmless and do not require any treatment but there are still few lesions that are potentially dangerous if left untreated.

CLASSIFICATION

Nature of the disease	Pathology
Neoplasias	Lipoma/liposarcoma
Cysts	Dermoid and epidermoidcysts,Lymphoepithelial cyst
Hyperplastic reactions	Verruciformxanthoma
Infectious	Pyostomatitisvegetans
Pigmental deposits	Jaundice, Carotenemia
Metabolic disorders	Amyloidosis, Hyalinosis cutis et mucosae,
Accessory lymphoid aggregates.	
Developmental alterations	Fordyce spots, Yellow hairy tongue

LIPOMA

Lipoma is a benign, slow growing tumor which is composed of mature adipose cells. Lipoma contributes to 15 to 20% of all benign tumors of head and neck and it accounts for 2.24% of the benign tumors of oral cavity³. Most common intraoral lipomas are seen in the buccal mucosal which accounts for about 50%. Other most common occurring sites includes floor of mouth, buccal vestibule and lip. The least favored sites are palate, gingiva and retromolar area⁴.The first description of the lesion was provided by Roux in 1848 in a review of alveolar masses and referred it as a "yellow epulis"⁵. When located in the superficial plane, there will be a yellow surface discoloration. When transilluminated, the tumour has a less dense and more uniform

appearance than surrounding fibrovascular tissues⁶. Magnetic resonance imaging (MRI) scans are very useful in diagnosis whereas computed tomography (CT) and ultrasound scans are less reliable. The treatment involves simple surgical excision, including a cuff of surrounding tissue to prevent local recurrences. An infiltrating lipoma must be 'de-bulked' where a portion of the infiltrating fat is deliberately left untouched to preserve as much normal tissue as possible⁷. Malignant transformations or recurrences are rare in oral cavity⁸.

LIPOSARCOMA

Liposarcomas (LPSs) are the most common soft tissue sarcomas representing 16% to 20% of all malignant soft tissue neoplasms⁹. It was first described by Virchows in 1857 as malignant neoplasms of the adipose tissue¹⁰. In the oral cavity, the lesion is even rarer, representing 0.3% of all sarcomas. Intraoral LPSs are mainly observed in the cheek, but several cases have been reported in the floor of the mouth, tongue, soft palate, mandible, lip, and gingiva¹¹. It is most commonly seen in patients between the ages of 40 and 60¹⁰.

Early diagnosis and complete resection plays a key role in the treatment of liposarcoma. The treatment of choice for liposarcomas is surgical excision^{12,13}. If frequent presence of satellite nodules means then wide surgical excision is necessary for adequate removal of the tumour. Almost 50 and 70% of tumours recur locally despite surgery^{14,15}. The role of radiotherapy have been report to reduce local recurrence after surgery.

DERMOID AND EPIDERMOID CYST

Dermoid and epidermoid cysts are cystic malformations which is lined with squamous epithelium. It constitute between 1.6% and 6.9% of all cystic in the head and neck region. The epidermoid cyst in oral mucosa is usually located on the attached gingiva called gingival cyst of adult¹⁶. In most cases, these cysts are treated by enucleation^{17,18,19}. Marsupialisation is also an alternative treatment especially for giant cysts¹⁷. When intraoral access is complicated, a combined intraoral and extraoral approach should be considered. Surgical excision is normally achieved without major complications and prognosis is very good^{18,19}.

LYMPHOEPITHELIAL CYST

Oral lymphoepithelial cyst is a rare lesion, which manifests as a pinkish to yellowish, small, asymptomatic, submucosal mass. Most cases presents as lymphoid aggregates in the floor of the mouth (65.3%) and the lateral and ventral surfaces of the tongue (13.7%). Histologically, lymphoepithelial cysts exhibit a cystic cavity lined by a parakeratinised stratified squamous epithelium. The luminal space is filled with sloughed epithelial cells and the epithelial lining is devoid of rete ridges. The fibrous capsule shows a dense lymphoid tissue, with germinal centres. The treatment is not required in most of the case²⁰. The lesions are removed by conservative surgical excision. After surgical excision, there are no reports of neoplastic transformation or recurrence^{21,22}.

VERRUCIFORM XANTHOMA

It is a rare slow-growing benign lesion of the skin and mucosa which is characterised by a granular (verruciform) surface. Most of them are asymptomatic clinically. It is yellowish-red or grey in colour and up to 2 cm in diameter. Histologically, it appears as a papillary and/or verrucous proliferation of the squamous epithelium with hyperparakeratosis and numerous foam cells. These cells are predominantly located within the papillae of the lamina propria. The differential diagnosis in which other papillomatous and verrucous lesions such as verrucous carcinomas or squamous cell carcinomas should be ruled out²³. The treatment of choice is surgical excision²⁴.

PYOSTOMATITIS VEGETANS

Pyostomatitis vegetans is characterised by erythematous, thickened oral mucosa with multiple yellow or yellowish white friable pustules and superficial erosions²⁶. The buccal mucosa shows 'cobble-stone' appearance. The histology shows epithelial acanthosis and superficial ulceration with intraepithelial and/or subepithelial abscesses containing large numbers of eosinophils. The connective tissue exhibits neutrophil and eosinophil infiltration, with miliary abscesses in some cases. The treatment focuses on control of the underlying gastrointestinal diseases²⁵. Surgical treatments in severe cases of inflammatory bowel disease involve total colectomy have resulted in permanent remission of the oral lesions²⁷. Oral lesions can be

managed with antiseptic mouthwashes such as chlorhexidine, and topical corticosteroids such as triamcinolone acetonide paste or betamethasone mouthwash.

JAUNDICE

The excess bilirubin in the blood results in the accumulation of bilirubin in tissues and oral mucosa, producing a yellowish discoloration²⁸. Soft palate and the sublingual region are often first to reveal a yellow hue due to its loose and thin mucosa²⁹. A yellowish to greenish pigmentation (biliverdin deposition) occurs in the teeth of children with hyperbilirubinemia.

CAROTENEMIA

Carotenemia is common in children which is mainly due to the excessive intake of carrots, but it can also be associated with the ingestion of many other yellow and green vegetables and citrus fruits. Carotene is a lipochrome that adds yellow colour to the skin. With elevated blood levels of carotene, the prominence of this yellowing is increased³⁰. It presents as a yellowish pigmentation in the palate, and nasolabial fold.

FORDYCES GRANULES

Fordyce granules appear as rice-like, yellow-white, asymptomatic papules measuring 1-3 mm in dimension. The granules remain constant throughout life and there is no surrounding mucosal change. It occurs most commonly in buccal mucosa (often bilateral), upper lip vermilion, and mandibular retromolar pad and tonsillar areas. No treatment is required for Fordyce granules, except for cosmetic removal from the labial lesions.

YELLOW HAIRY TONGUE

Hairy tongue (lingua villosa) is a defective desquamation of the filiform papillae resulting from a variety of precipitating factors. The prevalence varies from 8.3% in children and young adults to 57% in persons with drug addictions. The secondary factors include use of coloured mouthwashes, breath mints, candies³¹. The precipitating factors include poor oral hygiene, the use of medications (especially broad-spectrum antibiotics) and therapeutic radiation of the head and neck. The treatment involves surgical removal of the papillae using electrocauterization, carbon dioxide laser, or even scissors³².

AMYLOIDOSIS

Amyloidosis is characterized by proteinaceous fibrillar material amyloid, which is formed by extracellular accumulations of the insoluble protein fibril. Amyloidosis of the oral cavity is less frequent, and it usually appears as multiple soft nodules which is accompanied by yellow, red, blue, or purple coloring in the mucous membrane. The most common oral manifestation of amyloidosis is macroglossia, which occurs in 20% of patients. Oral amyloidosis is quite uncommon and occurs mostly as localized amyloidosis.

CONCLUSION

The clinical diagnosis and treatment planning of yellow lesions of oral cavity is of major concern to the patient as it determines the nature of future follow up care. An increased awareness of the occurrence of these yellow lesions in the oral region will hopefully result in the reporting of additional cases. Any suspicious oral yellow lesions should be examined properly with the help of other clinical findings and proper laboratory investigation to diagnose the disease at the earliest phase thereby reducing the morbidity and mortality of the patients.

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