ISSN: 2641-1962
DOI: 10.33552/OJDOH.2025.09.000707
Online Journal of Dentistry & Oral Health
Iris Publishers

Review Article

Diagnosis and Proper Identification of Most Common Oral Diseases and Lesions as A Healthcare Provider

Todd Brower DDS, MA*

Assistant Clinical Professor, Department of Restorative Clinical Sciences, University of Missouri--Kansas City, School of Dentistry, USA

***Corresponding author:** Todd Brower DDS, MA, Assistant Clinical Professor, Department of Restorative Clinical Sciences, University of Missouri--Kansas City, School of Dentistry, USA.

Received Date: August 11, 2025

Published Date: August 19, 2025

Keywords: Oral pathology; Oral lesions; Diseases of oral cavity; Common most seen oral diseases/lesions; Misdiagnosed Oral conditions; Oral diagnosis and prognosis

Introduction

Accurate diagnosis and identification of oral diseases and lesions are essential to providing high-quality, effective dental care. As healthcare providers, understanding the pathology of both the hard and soft tissues in the oral cavity allows for timely and precise intervention. This foundational knowledge enables clinicians to differentiate between benign conditions and potentially life-threatening diseases, directly influencing the course of treatment. When oral diseases are accurately identified, it fosters a better prognosis, leading to more successful outcomes, reduced treatment times, and improved patient satisfaction.

The ability to make an accurate diagnosis is a critical skill that underpins the entire spectrum of healthcare, and the field of dentistry is no exception. Whether it's identifying the subtle signs of periodontal disease, detecting early stages of oral cancer, or diagnosing common issues like caries or gingivitis, the accuracy of a diagnosis directly impacts the treatment plan. An informed clinician can not only prevent mistreatment but also avoid unnecessary referrals, tests, and procedures, which could otherwise burden both the patient and the healthcare system. Over-treatment or incorrect treatments can lead to patient distress, financial strain, and even harm.

Unfortunately, over the last 15 years, a troubling trend has emerged within the dental field—over-treatment of chronic, low-risk conditions such as incipient dental caries and stained deep fissures. These conditions are often treated aggressively, sometimes leading to unnecessary restorative procedures, when simple monitoring or preventive measures would suffice. At the same time, more serious and sometimes asymptomatic conditions, such as viral infections (e.g., herpes simplex virus) or bacterial infections, are occasionally overlooked or misdiagnosed. This lack of precision in diagnosis not only delays effective treatment but can also result in a missed opportunity for early intervention.

A healthcare provider's ability to accurately diagnose and recognize the full spectrum of oral conditions ensures that

patients receive appropriate care, tailored to their specific needs. Proper diagnosis minimizes the risk of under-treatment—where conditions such as oral cancers or severe periodontal disease go undetected—and over-treatment, where patients undergo unnecessary procedures. Furthermore, it supports the clinician's role as a reputable and trusted healthcare provider, capable of delivering treatment that maximizes the potential for positive health outcomes. Without this competence, providers risk misjudging the underlying pathology, leading to ineffective or inappropriate interventions that can negatively affect patient health.

In short, diagnosis is the cornerstone of effective treatment. It allows healthcare providers to confidently prescribe the most suitable therapies, prevent complications, and avoid harming patients through unnecessary interventions. The importance of mastering oral pathology extends far beyond just identifying diseases—it's about ensuring the best possible care and fostering long-term oral health for every patient. Through thorough and precise diagnostic practices, dental professionals have the power to make a significant difference in their patients' lives, ensuring that oral health is maintained and restored with the utmost accuracy and efficacy.

Common Oral Diseases and Lesions

Lymphoid Aggregates

Lymphoid aggregates are clusters of lymphatic tissue that are commonly found in the oropharynx, posterior tongue, and soft palate. These aggregates play an important role in the immune response by filtering out pathogens. Often small and asymptomatic, they may be mistaken for tumors but are typically benign and require no treatment. They do not cause significant health concerns unless they grow large or obstruct airways. If persistent or enlarging, they may need to be biopsied to rule out other pathologies.

Varix / Varices

Varices are dilated veins that appear as bluish or purple lesions on the tongue, lower lip, or buccal mucosa. These lesions are more common in older adults and individuals with a history of smoking or excessive alcohol consumption. Varices are typically benign and asymptomatic but can bleed if ruptured. They are diagnosed through clinical examination, and treatment is rarely necessary unless the lesion causes discomfort, bleeding, or cosmetic concerns. Surgical intervention is only required in severe or recurrent cases.

Torus of Maxilla / Mandible

A torus is a bony protuberance commonly seen on the hard palate (torus palatinus) or the mandible (torus mandibularis). It is generally asymptomatic and may cause issues only if it interferes with oral appliances like dentures or with normal oral function. Surgical removal is usually only necessary if the torus causes discomfort or affects the fitting of dentures. These growths are benign and can be present at birth or develop over time. No treatment is required unless they cause problems.

Idiopathic Osteosclerosis

Idiopathic osteosclerosis refers to an area of increased bone density in the jaw, typically seen on radiographs. It is usually asymptomatic and discovered incidentally during routine dental imaging. The cause remains unclear, though the condition is benign and non-progressive. These lesions generally require no treatment unless they cause complications, such as affecting adjacent teeth or leading to root resorption. If symptomatic or expanding, a biopsy may be necessary to confirm the diagnosis.

Foliate Papillae

Foliate papillae are specialized taste buds located on the lateral borders of the tongue. While they are a normal anatomical feature, they can become inflamed or irritated due to conditions like viral infections, trauma, or irritants. This inflammation is typically self-limiting and resolves once the underlying cause is addressed. Foliate papillae may appear swollen or red when

inflamed but usually cause minimal discomfort. Treatment involves managing the underlying condition if necessary.

Aphthous Stomatitis (Canker Sores)

Aphthous stomatitis, or canker sores, are painful ulcers that appear inside the mouth, often on the tongue, cheeks, or soft palate. These ulcers have a white or yellowish center and a red, inflamed border. Although the exact cause is unknown, they are often triggered by stress, trauma, or dietary factors. Canker sores usually heal on their own within 7–14 days, though severe cases may require corticosteroids or topical numbing agents. Recurrence is common in some individuals, but they are not contagious.

Herpes Simplex Virus Infections

Herpes simplex virus (HSV), particularly HSV-1, causes oral herpes, which manifests as cold sores or blisters around the lips and inside the mouth. The virus can lie dormant in the body after the initial infection and reactivate during times of stress, illness, or immune suppression. Primary herpetic gingivostomatitis can cause painful oral ulcers in children. Antiviral medications like acyclovir are used to reduce the severity and duration of outbreaks. It is highly contagious, and patients should be advised on how to minimize transmission during active outbreaks.

Leukoedema

Leukoedema is a benign, asymptomatic condition that causes a grayish-white, opalescent appearance on the buccal mucosa. It is more commonly observed in individuals with darker skin tones, particularly those of African descent. The condition becomes more pronounced when the mucosa is stretched, but it typically resolves when the tissue is relaxed. No treatment is required, as leukoedema poses no health risk. It is often confused with leukoplakia, which may be a sign of cancer, but leukoedema is harmless and non-cancerous.

Osteoporotic Bone Marrow Defects

Osteoporotic bone marrow defects are areas of reduced bone density within the jaw, often seen in older patients or those with systemic osteoporosis. These defects are typically asymptomatic and discovered incidentally during radiographs. While these

defects are benign, they may suggest underlying systemic bone health issues. They generally do not require treatment unless complications, such as tooth mobility or jaw pain, arise. If other signs of systemic disease are present, further evaluation may be necessary.

Fordyce Granules

Fordyce granules are small, yellowish or white sebaceous glands found on the inner mucosal surfaces of the lips, cheeks, and gums. These glands are a normal anatomical feature and are more commonly seen in adults, especially those over the age of 40. Fordyce granules are benign and typically asymptomatic, though they may cause cosmetic concerns. No treatment is necessary unless the patient expresses concern about their appearance. These lesions do not pose any health risks.

Mucocele

A mucocele is a fluid-filled cyst that occurs when a salivary gland duct is blocked or ruptures, often due to trauma. It appears as a smooth, bluish swelling, most commonly found on the lower

lip. While mucoceles are generally harmless, they can become painful if they rupture or continue to grow. Surgical excision is required if the mucocele persists or causes functional or cosmetic issues. Recurrence is possible if the duct remains blocked.

Irritation Fibroma

An irritation fibroma is a benign, fibrous lesion that forms in response to chronic irritation, such as from biting the cheek or wearing ill-fitting dental appliances. These lesions are firm, smooth, and painless but may cause discomfort if they interfere with chewing or speaking. The fibroma is typically pink or the same color as the surrounding mucosa. Treatment usually involves excision if the fibroma becomes large or painful. The recurrence rate is low if the source of irritation is eliminated.

Papillary Hyperplasia

Papillary hyperplasia is a condition where the oral mucosa undergoes excessive tissue growth, often in response to irritation from ill-fitting dentures. The overgrowth is typically red and pebbly, presenting as raised lesions on the palate or other parts of the mouth. This condition is most commonly seen in patients with poorly fitting dentures, which cause ongoing irritation and inflammation. Treatment includes improving denture fit and maintaining good oral hygiene. Surgical excision may be required for more severe cases.

Epulis Fissuratum

Epulis fissuratum is a benign overgrowth of soft tissue that forms around the edges of a denture due to chronic irritation. It appears as folds or ridges of tissue and can become ulcerated and painful if the denture does not fit properly. The treatment typically involves surgical excision of the tissue and adjusting the denture for a better fit. Preventive care includes ensuring dentures are properly fitted and maintained. In severe cases, the lesion may cause discomfort and affect the function of the denture.

Traumatic Ulcer

A traumatic ulcer is an oral wound caused by physical injury, such as biting the cheek, thermal burns, or chemical irritation. The lesion typically appears as a round or oval ulcer with a yellowish base and a red border, causing significant pain. Traumatic ulcers usually heal within one to two weeks once the source of trauma is eliminated. In some cases, pain relief is provided through topical agents or protective coatings. Persistent or recurrent ulcers may require further evaluation to rule out other causes or underlying conditions.

Papilloma

Papillomas are benign tumors caused by human papillomavirus (HPV), often appearing as wart-like growths in the oral cavity. These lesions are pedunculated, with a cauliflower-like surface, and are typically painless. Treatment usually involves surgical excision, as papillomas can cause discomfort if they grow large or obstruct oral function. HPV-related oral papillomas are generally not cancerous, but their presence warrants removal to avoid complications. Recurrence is uncommon if the lesion is fully excised.

Peripheral Ossifying Fibroma

Peripheral ossifying fibroma is a benign, reactive gingival lesion that contains both fibrous tissueand bone-like material. It typically occurs on the gingiva and is associated with local irritation or trauma. The lesion is usually firm and can cause discomfort if it interferes with oral function. Treatment involves surgical excision, often down to the periosteum, to prevent recurrence. Recurrence is possible if the lesion is not fully removed or the irritant remains present.

Pyogenic Granuloma

Pyogenic granuloma is a highly vascular lesion that often develops in response to irritation or trauma, appearing as a red, lobulated mass that bleeds easily. It is most common in pregnant women, often referred to as a "pregnancy tumor." The lesion is benign and typically resolves after the removal of the causative irritant. Treatment involves excision, particularly if the lesion is large or causes functional or aesthetic issues. Though benign, pyogenic granulomas can cause significant bleeding and discomfort, necessitating prompt treatment.

Peripheral Giant Cell Granuloma

Peripheral giant cell granuloma is a benign lesion found on the gingiva and sometimes the alveolar mucosa. It typically presents as a reddish or purple growth, often caused by irritation or local trauma. The lesion is composed of multinucleated giant cells and is usually painless. Treatment involves surgical excision, with the removal of any underlying irritants to prevent recurrence. Recurrence rates are low when the lesion is fully excised.

Drug-Induced Gingival Hyperplasia (Dilantin)

Drug-induced gingival hyperplasia refers to the overgrowth of gingival tissue caused by medications, particularly phenytoin (Dilantin), cyclosporine, and calcium channel blockers. The gingival

tissue becomes swollen, thickened, and sometimes inflamed, particularly in the interproximal areas. Good oral hygiene and regular professional cleanings are essential for managing this condition, and in some cases, surgical excision of the hyperplastic tissue may be necessary. If possible, the underlying medication should be adjusted or replaced. The condition can be exacerbated by poor oral hygiene, so patient education on oral care is crucial.

Pulpitis

Pulpitis is inflammation of the dental pulp, usually caused by untreated caries, trauma, or repeated dental procedures. The condition can be acute or chronic, with acute pulpitis causing intense pain, while chronic pulpitis may be less symptomatic. Treatment typically involves root canal therapy or tooth extraction if the pulp is irreversibly damaged. Early intervention is essential to prevent the spread of infection and preserve the tooth. Without treatment, pulpitis can lead to abscess formation or systemic infection.

Dental Caries

Dental caries, commonly known as cavities, are areas of tooth decay caused by the demineralization of enamel due to bacterial acid production. Risk factors include poor oral hygiene, frequent sugar consumption, and lack of fluoride. Treatment involves removing the decayed tissue and restoring the tooth with a filling. Prevention focuses on maintaining good oral hygiene, reducing sugar intake, and using fluoride products. If left untreated, dental caries can lead to pulpitis, abscess formation, and tooth loss.

Periodontitis

Periodontitis is a severe gum infection that damages the soft tissue and bone supporting the teeth. It is often the result of untreated gingivitis, caused by plaque buildup. Periodontitis leads to gum recession, pocket formation, and tooth mobility. Treatment typically includes scaling and root planing, along with antibiotics, and in some cases, surgery may be required to restore lost bone. Early detection and treatment are key to preventing tooth loss and systemic health issues.

Periapical Cyst

A periapical cyst is a type of odontogenic cyst that forms at the apex of a non-vital tooth, typically as a result of chronic inflammation or infection. It often develops following untreated pulpitis and can lead to bone destruction around the root. Most periapical cysts are asymptomatic, but they can cause swelling or discomfort if they enlarge. Treatment involves endodontic therapy or tooth extraction, and surgical removal of the cyst may be required in some cases. Regular follow-ups are essential to monitor for recurrence.

Plaque-Induced Gingivitis

Plaque-induced gingivitis is an inflammation of the gingiva caused by the accumulation of dental plaque. It presents as redness, swelling, and bleeding of the gums, particularly when brushing or flossing. Treatment focuses on improving oral hygiene to reduce plaque buildup and may include professional cleanings. Gingivitis can progress to periodontitis if left untreated. Early intervention is essential to prevent the progression to more severe gum disease.

Necrotizing Ulcerative Gingivitis (NUG)

Necrotizing ulcerative gingivitis is a severe form of gingivitis characterized by painful, ulcerated, necrotic gingiva. It is often associated with poor oral hygiene, stress, smoking, or immunocompromised states. The condition presents with sudden onset pain, foul odor, and bleeding of the gums. Treatment involves debridement of necrotic tissue, along with antibiotics and improved oral hygiene. Left untreated, NUG can lead to more severe periodontitis and tooth loss.

Periapical Dental Granuloma

A periapical dental granuloma is a chronic inflammatory lesion located at the apex of a tooth's root. It often results from an unresolved periapical infection or chronic pulpitis. The granuloma may be asymptomatic or cause localized swelling and pain. Treatment typically involves endodontic therapy or tooth extraction. Surgical removal of the granuloma may be necessary if the lesion persists after root canal treatment.

Pericoronitis

Pericoronitis is an infection of the gingiva surrounding a partially erupted tooth, often the third molar (wisdom tooth). It is commonly caused by bacterial accumulation under the operculum (soft tissue covering the erupting tooth). Symptoms include pain, swelling, and difficulty opening the mouth. Treatment may involve irrigation, antibiotics, and in some cases, extraction of the offending tooth. Prevention involves maintaining good oral hygiene and addressing impaction issues early.

Condensing Osteitis

Condensing osteitis is a localized increase in bone density that occurs around the apex of a tooth, typically due to a chronic low-grade infection. It is most commonly associated with teeth that have untreated caries or pulpitis. Radiographically, the lesion appears as a radiopaque area at the root tip. Treatment focuses on resolving the underlying infection, which may involve root canal therapy or tooth extraction. Condensing osteitis is generally benign and does not require intervention unless it causes symptoms.

Amalgam Tattoo

An amalgam tattoo is a benign lesion caused by the accidental implantation of dental amalgam particles into the oral mucosa. The lesion appears as a bluish or grayish discoloration of the mucosa, typically in the area where amalgam restorations were placed. No treatment is required unless the lesion causes cosmetic concerns. It is important to distinguish an amalgam tattoo from more serious lesions, such as melanoma, through clinical examination and biopsy if necessary.

Nasopalatine Duct Cyst

A nasopalatine duct cyst is a non-odontogenic cyst that originates from the remnants of the nasopalatine duct. It is located

in the anterior maxilla, typically near the incisive canal. Symptoms include swelling, discomfort, and occasionally, drainage from the nasal cavity. Treatment involves surgical enucleation of the cyst. Early diagnosis is important to prevent complications, such as infection or bone destruction.

Dentigerous Cyst

A dentigerous cyst is an odontogenic cyst that surrounds the crown of an unerupted or impacted tooth, usually the third molar. The cyst can cause swelling, displacement of adjacent teeth, and bone destruction. Treatment typically involves the removal of the cyst along with the impacted tooth. In rare cases, the cyst can become infected or transform into a more serious lesion, such as ameloblastoma, requiring further intervention. Surgical removal is often curative.

Leukoplakia

Leukoplakia is a clinical term used to describe white patches or plaques that form on the mucous membranes of the mouth, most commonly on the cheeks, gums, or tongue. These patches cannot be scraped off and may vary in texture from smooth to rough. Leukoplakia is often associated with chronic irritation, such as tobacco use, alcohol consumption, or poorly fitting dentures. While it is typically benign, leukoplakia can sometimes be a precursor to oral cancer, particularly if the patches become red or ulcerated. Biopsy and monitoring of these lesions are essential to assess the potential for malignant transformation.

Hairy Tongue

Hairy tongue is a condition where the filiform papillae on the tongue become elongated and discolored, usually due to an accumulation of keratin. This results in a black or brown appearance, giving the tongue a "hairy" look. The condition is often caused by poor oral hygiene, smoking, alcohol use, or antibiotic use, which disrupt the normal balance of bacteria in the mouth. Hairy tongue is typically harmless and can be managed by improving oral hygiene and regular tongue cleaning. In severe cases, treatment may involve the use of antibiotics or antifungal agents if infection is present.

Erythroplakia

Erythroplakia is a red, velvety lesion found on the mucous membranes of the oral cavity, often on the floor of the mouth, tongue, or soft palate. It is considered a premalignant condition, as about 50% of erythroplakic lesions can develop into squamous cell carcinoma. The lesion may be asymptomatic but often represents a serious pathological condition that requires prompt evaluation. A biopsy is essential to confirm the diagnosis and to assess whether malignant changes are present. Early detection and management of erythroplakia can help prevent the progression to oral cancer.

Squamous Cell Carcinoma

Squamous cell carcinoma (SCC) is the most common malignant tumor of the oral cavity, originating from the epithelial cells lining the mouth and throat. It typically presents as an ulcerated, indurated lesion that may be painful, bleed, or show signs of rapid growth. Risk factors include tobacco use, alcohol consumption, HPV infection, and poor oral hygiene. Treatment typically involves surgical excision, radiation therapy, and possibly chemotherapy, depending on the stage of the cancer. Early detection is crucial for successful treatment and improved survival rates.

Snuff Lesions

Snuff lesions are oral mucosal changes caused by the chronic use of smokeless tobacco products, such as snuff or chew. These lesions often appear as white, thickened areas in the mucosa, typically located where the tobacco is held in the mouth. The condition is a type of leukoplakia and is associated with an increased risk of oral cancer. Cessation of tobacco use and monitoring the lesions for potential malignancy is critical. Treatment often includes cessation programs and regular follow-ups with biopsies if lesions show signs of dysplasia.

Cementoma

A cementoma is a benign tumor that forms from cementum, a calcified substance found on the roots of teeth. These lesions often occur in the mandible and are more common in middle-aged adults. Cementomas are typically asymptomatic and are discovered incidentally during radiographic examinations. Treatment involves monitoring the lesion, as most cementomas do not require intervention unless they cause symptoms such as pain or tooth mobility. In some cases, surgical excision may be necessary if the lesion becomes large or symptomatic.

AIDS and the Soft Tissue Effect

AIDS (Acquired Immunodeficiency Syndrome) can lead to a range of oral manifestations due to the suppression of the immune system. Common oral conditions in individuals with AIDS include candidiasis, Kaposi's sarcoma, hairy leukoplakia, and periodontal disease. These lesions are often painful and may complicate the management of oral health. Antiretroviral therapy can help manage the underlying immune deficiency, and antifungal, antiviral, or anticancer treatments may be necessary to address oral manifestations. Regular dental care and monitoring for these conditions are essential for improving the quality of life and oral health in individuals with HIV/AIDS.

Summary and Conclusion

The accurate diagnosis and proper identification of oral diseases and lesions are vital components of comprehensive dental care. Healthcare providers must have a strong understanding of oral pathology, as it enables them to make informed decisions, ensuring that patients receive the most appropriate treatment. With an in-depth knowledge of common and rare oral conditions, clinicians can minimize the risk of over-treatment or under-treatment, thereby improving patient outcomes and ensuring optimal oral health.

Over the last 15 years, there has been an alarming trend in over-treatment of chronic conditions, such as caries and stained deep fissures, while other more serious conditions—such as

bacterial or viral infections—are sometimes missed. It is essential that dental professionals not only manage these chronic conditions but also remain vigilant for signs of more critical issues that may not present with typical symptoms.

The diseases and lesions reviewed in this article highlight the complexity of oral health and the need for a comprehensive approach to diagnosis. Regular dental examinations, ongoing education for both healthcare providers and patients, and early intervention remain critical in managing these conditions effectively. By fostering an understanding of oral pathology, dental professionals play a key role in preventing complications, improving patient care, and ultimately contributing to better health outcomes.

Acknowledgement

None.

Conflict of Interest

No Conflict of Interest.