1. Introduction (international teeth denomination)

1.1. TOOTH ERUPTION AND TEETH DENOMINATION

Human beings have two sets of teeth: primary (milk or baby) and permanent. There are 20 primary teeth, including two incisors, one canine, and two molars in each half jaw. These teeth erupt at approximately six months, and the set is complete by two years of age. The primary teeth are shed between six and 12 years of age. These are eventually replaced by permanent teeth starting at approximately age six and usually ending by age 18. The permanent teeth include two incisors, one canine, two premolars, and three molars in each half jaw.
1.2. Basic Dental Anatomy

The diagram below shows a typical human tooth. All human adult teeth conform to the same basic structure shown here.

There is a visible **crown** projecting above the **gum** (medically known as the gingiva).

The **root** of the tooth is embedded in the **alveolar bone** of the jaw and is covered in a layer of **cementum**. The alveolar bone does not hold the teeth in place; rather, the teeth are stabilized by connective tissue called periodontal ligaments that extend between tooth-roots and sockets.

**Enamel** is an extremely hard material which covers the crown and the root of the teeth. This protects the more delicate inner structures of the tooth and provides the hard surface required for the functions outlined above.

The inner layer of the tooth is formed from **dentine** which has a similar structure to bone. In the centre of the tooth there is a **pulp** cavity which contains nerves and blood.
vessels. It is the stimulation of these nerves which causes the intense pain associated with dental caries.

CHAP. II. STOMATOLOGY DISEASES/DISORDERS

1. Dental caries/teeth decays

It is a disease of microbial origin in which the dietary carbohydrates are fermented by the bacteria forming an acid which causes gradual pathologic disintegration and dissolution of the tooth enamel and dentin with eventual involvement of the pulp.

1.1 Risk factors contribute to tooth decay.

Saliva helps prevent plaque from attaching to teeth and helps wash away and digest food particles.

- A low salivary flow or dry mouth leaves the teeth more vulnerable to tooth decay.
- Genetic factors: tooth size and shape, thickness of enamel, tooth position, tooth eruption time and sequence, and the bite.
- Autoimmune diseases (such as Sjögren’s syndrome, characterized by dry eyes, dry mouth, and connective tissue disorder)
- Poor dental hygiene
- Smoking

1.2 Etiology of Dental Caries

Interaction of three factors results in dental caries:

1. **The proper microflora**: Normal flora of the oral cavity contains abundance of bacteria which derive their energy by the chemical process of fermentation. Mainly the bacteria are Streptococcus Mutans, and streptococcus sobrinus collectively known mutans streptococci(MS)

2. **Suitable substrate for the microflora**: fermentable carbohydrates (sucrose) serve as substrates for the microbial enzyme systems that produce organic acid (primarily lactic acid).

3. **Dental plaque (a combination of these carbohydrates, bacteria and saliva glycoproteins)**: serves as a localized site of acid production and impedes the buffering and remineralization action of the saliva.

![Dental caries](image)

1.3. Pathophysiology of Dental Caries

There are four main criteria required for caries formation: (1) Tooth surface (enamel or dentin), (2) Caries-causing bacteria, (3) Carbohydrates, (4) Time.

Bacteria are normally present in the mouth. The bacteria convert all foods—especially sugar and starch into acids. Bacteria, acid, food debris, and saliva combine in the mouth
to form a sticky substance called **plaque** that adheres to the teeth. It is most prominent on the grooved chewing surfaces of back molars, just above the gum line on all teeth. Plaque that is not removed from the teeth mineralizes into calculus (tartar). Plaque and calculus irritate the gums, resulting in gingivitis. It is well known that **tooth decay can lead to the destruction and eventual loss of teeth**. The acids in plaque dissolve the enamel surface of the tooth and create holes in the tooth (cavities). Cavities are usually painless until they grow very large inside the internal structures of the tooth (the dentine and the pulp at the core) and can cause death of the nerve and blood vessels in the tooth, resulting in tooth abscess. Five stages are to be considered:

- **Early stages**: acids dissolve the enamel in the crown of the tooth
- **Moderate tooth decay**: here the dentine is attacked by acids and bacteria invade the cavity.
- **Advanced tooth decay**: inflammation of the pulp.
- **Necrosis** (death) of the pulp tissue.
- **Periapical abscess** forms at the apex of the root

1.4 **SIGNS AND SYMPTOMS.**

In general, you will experience no serious symptoms from dental caries. If they are present, they may include toothache or sensitivity to hot or cold foods and beverages.

Symptoms of dental caries are usually localized to the mouth. They include:

- Holes in the surface of a tooth
- Pain when chewing
- Sensitivity to hot or cold foods and beverages
- Toothache
- Swelling sometimes

1.5 **EXAMS AND TESTS** (diagnosis)

- Most cavities are discovered in the early stages during routine dental checkups.
- A dental exam may show that the surface of the tooth is soft.
- Dental x-rays may show some cavities before they are visible to the eye.

1.6 **DENTAL CARIES PREVENTION**

- Examinations by a dentist should begin when patients are one year of age.
- A six-month interval for dental checkups.
• Adding fluoride at a concentration of 0.7 to 1.0 parts per million (ppm) to the municipal water supply. Fluoride forms a complex with the apatite crystals in the enamel and dentin; where there are lesions and enhances remineralization at the site of the caries, thereby strengthening the tooth structure. Fluoride also has a bacteriostatic effect.
• There is a recent trend toward using bottled water instead of water from the municipal supply.
• Most bottled waters contain less than 0.3 ppm of fluoride; therefore, persons who rely on bottled water alone may need to add oral or topical fluoride to their oral hygiene regimen.
• Fluoridated toothpastes have a similar degree of effectiveness for the prevention of dental caries in children. Parents should introduce tooth brushing with a pea-size amount of low-fluoride toothpaste to children at two years of age.
• Removing dental plaque helps the patient maintain good oral health.
• Tooth brushing with fluoridated tooth-paste twice a day after meals is recommended as an effective way to prevent tooth decay.
• Finally, the physician could recommend dietary changes, such as decreasing the amount and frequency of consumption of foods with a high sugar content.

1.7 TREATMENT

It can be treated in the earlier stages by filling the tooth. For this purpose, we have a variety of tooth compatible materials. There are also tooth colored fillings (composite restorations), which are aesthetically very pleasing, done by polymerization with a high intensity light. This technique is used to repair the broken or chipped off edges of a tooth. Treatment can help prevent tooth damage from leading to cavities.

Treatment may involve:

• Fillings
• Crowns
• Root canals

Root Canal Treatment (RCT)

However, when caries extend deep and cause the nerve to be exposed then Root Canal Treatment (RCT) is the best option in which the irritated nerve is removed and is replaced by an inert root filling. With this procedure, the tooth will never encounter any pain. To further protect the structure of the tooth, it is covered by a full porcelain crown.

1.8 Possible Complications

• Discomfort or pain
• Fractured tooth
• Inability to bite down on tooth
• Tooth abscess
• Tooth sensitivity

2. PARODONTOPATHIES

It is a progression of gingivitis to the point that loss of supporting bone has begun where the most common is periodontitis. In other words, it is characterized by the loss of supportive bone structure caused by chronic gingivitis; this results in detachment of the periodontal ligament from the tooth.

Periodontitis can be classified as juvenile or adult according to the patient's age and to a slight difference in the microbiology and pathogenesis.

In localized juvenile periodontitis (12 to 17 years of age), there is very little dental plaque involvement, but there is a loss of vertical alveolar bone.

Adult periodontitis normally occurs in patients older than 30 years, and the periodontitis is usually asymptomatic.

Radiographs of (A) alveolar bone loss in periodontitis (arrow) compared with (B) normal alveolar bone structure (arrow).

RISK FACTORS

- Gingivitis
- Heredity
- Poor oral health habits
- Tobacco use
- Diabetes

CAUSES
Our mouths are full of bacteria. These bacteria, along with mucus and other particles, constantly form a sticky, colorless “plaque” on teeth.

SIGNS AND SYMPTOMS

- Clinical examination may show deep gum pockets that bleed easily when probed
- Subgingival dental plaque
- Receding gums that expose the root of the tooth.
- Pus may appear between the teeth and gums
- Periodontal abscess is a severe consequence of periodontitis and may present as a red, fluctuant swelling of the gingiva that is extremely tender to palpation (Figure below).

The abscess may be focal, or, if diffuse, may spread to deeper oral spaces, causing swelling of the face and jaw and lymphadenopathy.

![Advanced periodontitis of the lower teeth.](image)

TREATMENT

Antibiotics are not normally indicated if mechanical debridement is successful in the case of localized periodontitis. Adding chlorhexidine rinse after surgical debridement contributes to faster recovery of periodontal tissue. In generalized periodontitis involving multiple teeth, patients should be treated with antibiotics as an adjunct therapy. In patients with juvenile periodontitis, tetracycline is safe to use after 12 years of age, but the pathogens in this disease have been increasingly resistant to this treatment regimen. Adult periodontitis can be treated with doxycycline, metronidazole (Flagyl), or topical application of minocycline microspheres (Arestin). If cellulitis occurs, patients should be treated with antibiotics.

Complications

- Infection or abscess of the soft tissue (facial cellulitis)
- Infection of the jaw bones (osteomyelitis)
- Return of periodontitis
- Tooth abscess and Tooth loss
- Tooth flaring or shifting

Prevention: Good oral hygiene
3. PULPITIS

Pulpitis refers to the inflammation of the dental pulp (containing the blood vessels, nerves and connective tissue) resulting in toothache.

Etiopathology:

Pulpitis may result from thermal (especially cold drinks), chemical, traumatic or bacterial irritation. Inflammation and infection secondary to dental caries is the most frequent cause.

There are two forms of pulpitis: acute or chronic.

Acute pulpitis is usually found in the teeth of children and adolescents and is generally marked by more noticeable pain to the affected teeth than in chronic pulpitis.

Pulpitis can also be classified as reversible or irreversible.

Reversible pulpitis is caused by caries encroaching on the pulp and manifests itself as mild inflammation of the pulp. It does not have to be treated as it will heal on its own over time. Irreversible pulpitis is caused the progression of reversible pulpitis and manifests itself as severe inflammation of the pulp.

Symptoms of acute pulpitis include: a constant throbbing pain in the affected tooth that is often made worse by reclining or lying down; acute sensitivity in the affected tooth that becomes painful when confronted with hold or cold stimuli; a sharp stabbing pain in the affected tooth; changes in the affected tooth’s colour; or swelling of the gum or face in the area of the affected tooth. Acute pulpitis itself takes two different forms: purulent acute pulpitis in which the pulp is completely inflamed; and gangrenous acute pulpitis in which the pulp begins to die in a less painful manner that can lead into the formation of an abscess.

Treatment

✧ Cleansing of the cavity to remove food debris and the application of clove oil.
✧ Packing the cavity with the zinc oxide-eugenol cement will provide accumulation of food debris.
✧ Infected pulpal tissue should be removed, or the tooth should be removed.

COMPLICATION: periapical abscess in the periodontal tissue around the apical foramen
Pulpitis and its complications: periapical abscess and cellulitis.

4. SALIVARY GLANDS DISEASES (PAROTITISES)

Salivary gland disorders are conditions that lead to swelling or pain in the saliva-producing tissues around the mouth.

Salivary glands and their functions

The salivary glands produce saliva (spit), which moistens food to aid chewing and swallowing. Saliva contains enzymes that begin the digestion process. Saliva also cleans the mouth by washing away bacteria and food particles. Saliva keeps the mouth moist and helps keep dentures or orthodontic appliances (such as retainers) in place.

There are three pairs of salivary glands:

- The two largest are the parotid glands, one in each cheek in front of the ears
- Two glands are under the floor of the mouth (sublingual glands)
- Two glands are at the back of the mouth on both sides of the jaw (submandibular glands)

All of the salivary glands empty saliva into the mouth through ducts that open at various locations in the mouth.

Causes and types

The salivary glands may become inflamed (irritated) because of infection, tumors, or stones.

Some of the most common salivary gland disorders include:
1. **Sialolithiasis** (salivary gland stones). Small stones rich in calcium sometimes form inside the salivary gland and related to unknown cause. This disorder is also called ptyalith. Some of them may related to:
   - Dehydration, which thickens the saliva
   - Decreased food intake, which lowers the demand for saliva
   - Medications that decrease saliva production, including certain antihistamines, blood pressure drugs and psychiatric medications

Some stones sit inside the gland without causing any symptoms. In other cases, a stone blocks partially or completely the gland's duct. When this happens, the gland typically is painful and swollen, and saliva flow is partially or completely blocked. This can be followed by an infection called sialadenitis.

2. **Sialadenitis** (infection or inflammation of a salivary gland). Also called sialoadenitis, or sialitis. Sialadenitis is a painful infection that usually is caused by bacteria. It is more common among elderly adults with salivary gland stones. Sialadenitis also can occur in infants during the first few weeks of life. This may be caused by:
   - Dehydration, malnutrition, eating disorders
   - Recent surgery, chronic illness, cancer, prematurity
   - Antihistamines, diuretics, psychiatric medications, blood pressure medications, barbiturates
   - History of Sjögren's syndrome
   - Air blowing occupations (trumpet playing, glass blowing)

3. **Viral infections.** Systemic viral infections sometimes settle in the salivary glands. This causes facial swelling, pain and difficulty eating. The most common example is *mumps.*
4. **Cysts** (tiny fluid-filled sacs). Babies sometimes are born with cysts in the parotid gland because of problems related to ear development before birth. Later in life, other types of cysts can form in the major or minor salivary glands. They may result from traumatic injuries, infections, or salivary gland stones or tumors.
5. **Benign tumors** (noncancerous tumors). Most salivary gland tumors occur in the parotid gland. The majority are benign. The most common type of benign parotid tumor usually appears as a slow-growing, painless lump at the back of the jaw, just below the earlobe. *Risk factors include radiation exposure and possibly smoking.*
6. **Malignant tumors** (cancerous tumors). Salivary gland cancers are rare. They can be more or less aggressive. The only known risk factors for salivary gland cancers are Sjogren's syndrome and exposure to radiation. *Smoking* also may play some role.
7. **Sjogren’s syndrome.** Sjogren’s syndrome is a chronic autoimmune disorder. The body's immune defenses attack the salivary glands, the lacrimal glands (glands that produce tears), and occasionally the skin's sweat and oil glands.

8. **Sialadenosis** (nonspecific salivary gland enlargement). Sometimes, the salivary glands become enlarged without evidence of infection, inflammation or tumor. This nonspecific enlargement is called sialadenosis. It most often affects the parotid gland, and its cause remains unknown.

**Diagnosis**

- **Blood tests.** To look for a high white blood count that would suggest a bacterial infection.
- **X-rays.** To detect salivary gland stones
- **Magnetic resonance imaging** (MRI) or **computed tomography (CT)** scans to detect tumors and stones not visible on X-rays.
- **Fine-needle aspiration.** This test uses a thin needle to remove cells from the salivary gland to determine whether a tumor is cancerous.
- **Sialography.** Dye is injected into the gland's duct so that the pathways of saliva flow can be seen.
- **Salivary gland biopsy.** This is removal of a small piece of tissue to diagnose a cyst, tumor or Sjogren's syndrome.

**Symptoms of salivary glands diseases**

- Abnormal tastes, foul tastes
- Decreased ability to open the mouth
- Discomfort when opening the mouth
- Dry mouth
- Pain in the face or mouth pain
- Swelling in front of the ears
- Swelling of the face or neck

**Treatment**

Drinking a lot of water, using sugar-free lemon drops to increase the flow of saliva, and massaging the gland with heat may help with infections and stones.

Antibiotics are used for bacterial infections.

Stones may be removed using endoscopes, **lithotripsy**, or surgery.

**Lithotripsy** is a medical procedure that uses shock waves to break up stones in the kidney, bladder, or ureter (tube that carries urine from the kidneys to the bladder). After the procedure, the tiny pieces of stones pass out of the body in the urine.
Other treatments depend on the specific disorder.

**Prevention**

Most of the problems with salivary glands cannot be prevented. Drinking enough fluids, using things that increase salivation (for example, sour candy), and massaging the gland can increase the flow of saliva and help prevent infection.

5. **GLOSSITIS.**

The tongue is made up of muscles and helps talking, swallowing, taste and chew. The upper surface of the tongue is lined with papillae, which are little bumps that help grip food as we chew and contain the taste buds.

**Definition**

Glossitis is a condition characterized by a swollen, smooth-looking tongue that has changed color, commonly to an unusually dark red color. Glossitis is also called smooth tongue and burning tongue syndrome. Acute or chronic inflammatory disturbance of the tongue.

It can be a primary disease of the tongue or a symptom of disease elsewhere.

**Causes of glossitis**

- Glossitis may occur by itself
- Variety of diseases, disorders and conditions.
- Pernicious anemia or pemphigus vulgaris (an autoimmune disorder).
- Other causes may be relatively mild, such as a small cut when you have bitten the tongue.
- Bacterial, yeast and viral infections can also lead to glossitis.
- Variety of irritants and exposure to very hot foods or beverages, spicy foods, tobacco, and alcohol.
- Can be a side effect of certain medications.

**Risk factors for glossitis**

A number of factors increase the risk of developing glossitis. Risk factors include:

- Advanced age
- Alcohol abuse
- Dentures or other dental appliances
- Parent or sibling with glossitis
- Poor nutrition
- Poor oral hygiene
- Smoking or chewing tobacco
- Weakened immune system

**The symptoms of glossitis.**

The symptoms of glossitis include:

- Change in tongue color from its normal pink to a paler pink, dark red, or bright red
- Pain or discomfort with chewing, swallowing or talking
- Smooth texture and appearance of the tongue
- Tongue pain, soreness or tenderness
- Tongue swelling

**Serious symptoms that might indicate a life-threatening condition**

In some cases, glossitis can be caused by a serious infection that is spreading, or lead to moderate to severe tongue swelling that can block the airway and interfere with breathing. **Seek immediate medical care** if you, or someone you are with, have these serious symptoms:

- Change in level of consciousness or alertness, such as passing out or unresponsiveness
- Respiratory or breathing problems, such as severe shortness of breath, difficulty breathing, labored breathing, making noises with breathing, not breathing, or choking
- Sudden swelling of the face, lips and tongue

**Glossitis treatment**

Treatment of glossitis varies depending on the underlying cause. The goal of treatment is to control tongue inflammation regardless of the cause of glossitis. In addition to avoiding very hot liquids, treatment includes:

- Anesthetic mouth rinses such as viscous lidocaine (Xylocaine)
- Antihistamine mouth rinses such as diphenhydramine (Benadryl)
- Antimicrobial medications and mouth rinses to treat infectious causes of glossitis
- Corticosteroid mouth rinses such as dexamethasone (Decadron)
- Dietary changes and nutritional supplements to treat anemia and nutritional deficiencies
- Magic Swizzle or Magic Mouthwash, which are generic terms for mouthwashes containing a variety of ingredients, such as antacids, anesthetics, antihistamines, antimicrobials and corticosteroids. The specific recipe will be determined by the healthcare provider.
- Nonsteroidal anti-inflammatory drugs (NSAIDs), such as **ibuprofen** (Advil, Motrin), naprosyn (Naproxen, Aleve), and indomethacin (Indocin)
Prevention

To be able to lower the risk of developing glossitis by:

- Avoiding hot liquids, hot food, or spicy food if they cause you to have symptoms of glossitis
- Eating a balanced diet
- Ensuring that dentures and other dental appliances fit properly and do not cut or chafe the mouth
- Not drinking alcohol or limiting alcohol intake to one drink per day for women and two drinks per day for men
- Practicing good oral hygiene techniques, such as regular tooth brushing and flossing, tongue brushing, and getting regular professional cleanings and checkups
- Seeking treatment for infections, such as syphilis and yeast infection as appropriate
- Stopping smoking or chewing tobacco

Complications of glossitis

Complications associated with glossitis can be progressive and vary depending on the underlying cause including:

- Difficulty breathing, ineffective breathing, and respiratory arrest due to blockage of the airway
- Difficulty chewing or swallowing and tongue swelling
- Discomfort and Speech problems
- Spread of infection
- Surgery to remove the tongue due to a serious infection or malignant condition

6. ORAL-PHARYNGEAL CANDIDA.

Oropharyngeal candidiasis (OPC) is the general term given to the oral infection caused by Candida. This condition is also often referred to informally as thrush. It meets all the criteria to be considered as an opportunistic infection.

Epidemiology

Candidas are part of the normal mouth flora in 25-50% of healthy individuals. Candida albicans is the most frequent colonizer (70-80%) but any of the non-albicans Candida may be seen.

Risk factors
Salivary flow, salivary pH, and glucose concentration influence the frequency of oral Candida colonization. Specifically, carriage rates are higher in:
- HIV-infected patients and patients with AIDS, where the rate of carriage is a function of the level of immunosuppression. Patients heavily treated with fluconazole carry non-albicans Candida resistant to the azole antifungal agents.
- Hospitalized patients regardless of underlying disease.
- Denture users, Diabetic patients and Cancer patients.

OPC also goes beyond mere carriage to the presence of symptomatic infection. *This transformation from asymptomatic colonization to symptomatic disease* occurs most often in people in the extreme of their lives (neonates and the elderly), patients with debilitating conditions, and individuals receiving certain types of drug therapy.

### Factors that promote development of symptomatic OPC

<table>
<thead>
<tr>
<th>Treatment-related (iatrogenic)</th>
<th>Disease-Related</th>
<th>General Conditions</th>
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</thead>
<tbody>
<tr>
<td><em>Local treatments</em></td>
<td><em>Immunodeficiencies</em></td>
<td>Age</td>
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<tr>
<td>Inhaled steroids</td>
<td>HIV-AIDS</td>
<td>Premature infants</td>
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<tr>
<td>Oropharyngeal irradiation</td>
<td>CMC</td>
<td>Newborn infants</td>
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<tr>
<td>Trauma (dentures)</td>
<td>Malignancies,</td>
<td>Elderly individuals</td>
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<td><em>Systemic treatments</em></td>
<td><em>Endocrinopathies</em></td>
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<tr>
<td>Broad-spectrum antibiotics</td>
<td>Diabetes mellitus</td>
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<tr>
<td>Cytotoxic cancer therapy</td>
<td>Adrenal dysfunction</td>
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<td>Immunosuppressive therapy</td>
<td>Hypothyroidism</td>
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<td>Corticosteroids</td>
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<td><em>Nutritional</em></td>
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<td><em>Malnutrition</em></td>
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Patients subjected to radiotherapy for the treatment of oral and pharyngeal malignancies are also frequently affected with OPC.

### Clinical Manifestations

The general characteristics of the three main forms of OPC are shown in the table, with a more detailed discussion following:

<table>
<thead>
<tr>
<th>Type</th>
<th>Site(s) affected</th>
<th>Appearance</th>
<th>Symptoms</th>
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- **Type**
- **Site(s) affected**
- **Appearance**
- **Symptoms**
### Pseudomembranous Oropharyngeal Candidiasis

This is the most frequently recognized presentation commonly called *thrush* that can involve any part of the mouth. Chronic oral discomfort associated with this form, especially in patients with AIDS, may impair the intake of adequate oral nutrition and contribute to weight loss and inanition. The presence of odynophagia (pain on swallowing due to the disorder of oesophagus) suggests extension of the process to the form known as *Esophageal candidiasis*.

### TREATMENT

**Oral therapy** is convenient and very effective as first-line treatment.

**Fluconazole** 100 mg PO once daily for 7-14 days

**Alternative topical therapy** is less expensive, safe for use during pregnancy, and effective for mild to moderate disease. Such therapies include 7-14 days of the following:

- Clotrimazole troches 10 mg dissolved in the mouth 5 times daily
- Nystatin oral suspension 5 mL "swish and swallow" QID
- Miconazole mucoadhesive tablet PO daily

**Other alternatives** include 7-14 day therapy with the following (Note: These agents may present a greater risk of drug interactions and hepatotoxicity than do fluconazole or...
topical treatments, so these typically are reserved for use in cases of documented azole resistance or in cases clinically refractory to azole therapy):

- Itraconazole oral solution 200 mg PO once daily
- Posaconazole oral solution 400 mg PO BID for 1 day, then 400 mg PO once daily

3. Oral tumours

Definition.

Oral cancers are malignant tumors that occur anywhere inside the mouth. Most of them are squamous cell carcinomas that start in the surface lining of the mouth. The most common location is the lip or tongue.

Causes oral cancer

- What causes cells to undergo changes that lead to cancer is not known.
- However, several risk factors are known.

Risk factors for oral cancer

- Age over 35 years and alcohol abuse
- Chronic irritation of the mouth, Sun exposure
- Diet low in vegetables and fruits
- Human papilloma virus (HPV) infection
- Male gender, poor oral hygiene and smoking or use of other tobacco products

Symptoms of oral cancer and this might indicate a serious condition:
- Sore or lump in the mouth that does not go away.
- Problems with eating, swallowing and talking
- Altered sense of taste and bleeding
- Swollen lymph nodes in the neck
- Thickened area in the mouth
- Unexplained weight loss

Oral cancer treatment

Seeking regular medical care throughout the life, including regular dental care.

- Chemotherapy to attack cancer cells
- Radiation therapy to attack cancer cells
- Surgery to remove the cancer and evaluate how far it has spread

Other treatments for oral cancer (symptomatic)

- Antinausea medications if nausea occurs
- Blood cell growth factors to increase the number of white blood cells if these get too low
- Blood transfusions to temporarily replace blood components (such as red blood cells) that have dropped to low levels
- Dietary counseling to help maintain strength and nutritional status
- Reconstructive surgery to restore structures that have been removed
- Occupational and physical therapy to help with eating, swallowing, or talking problems
- Pain medications as needed to increase comfort
- Also acupuncture and massage therapy may be used.

The potential complications of oral cancer

Complications of oral cancer can be serious, even life threatening in some cases and include:

- Decreased ability to eat, drink, talk or breathe
- Hemorrhage (uncontrolled bleeding)
- Recurring cancer after treatment
- Spread of cancer into nearby structures, to lymph nodes in the neck and to distant areas of the body

Reducing the risk of oral cancer (Prevention)

- Eating plenty of vegetables and fruits
- Practicing good oral care
- Quitting use of tobacco products, including cigarettes and smokeless tobacco
- Reducing alcohol consumption and sun exposure
- Seeing the dentist regularly
- Wearing sunscreen year round, including on the lips