

Diseases and conditions causing lesions of the oral mucosa

Condition	Usual Location	Clinical Features	Course
Viral Diseases			
Primary acute herpetic gingivostomatitis (herpes simplex virus type 1, rarely type 2)	Lip and oral mucosa	Labial vesicles that rupture and crust, and intraoral vesicles that quickly ulcerate; extremely painful; acute gingivitis, fever, malaise, foul odor, and cervical lymphadenopathy; occurs primarily in infants, children, and young adults	Heals spontaneously in 10 to 14 days unless secondarily infected
Recurrent herpes labialis	Mucocutaneous junction of lip, perioral skin	Eruption of groups of vesicles that may coalesce, then rupture and crust; painful to pressure or spicy foods	Lasts about 1 week, but condition may be prolonged if secondary infection occurs
Recurrent intraoral herpes simplex	Palate and gingiva	Small vesicles that rupture and coalesce; painful	Heal spontaneously in about 1 week
Chickenpox (varicella-zoster virus)	Gingiva and oral mucosa	Skin lesions may be accompanied by small vesicles on oral mucosa that rupture to form shallow ulcers; may coalesce to form large bullous lesions that ulcerate; mucosa may have generalized erythema	Lesions heal spontaneously within 2 weeks
Herpes zoster (reactivation of varicella-zoster virus)	Cheek, tongue, gingiva, or palate	Unilateral vesicular eruption and ulceration in linear pattern following sensory distribution of trigeminal nerve or one of its branches	Gradual healing without scarring; postherpetic neuralgia is common
Infectious mononucleosis (Epstein-Barr virus)	Oral mucosa	Fatigue, sore throat, malaise, low-grade fever, and enlarged cervical lymph nodes; numerous small ulcers usually appear several days before lymphadenopathy; gingival bleeding and multiple petechiae at junction of hard and soft palates	Oral lesions disappear during convalescence
Warts (papillomavirus)	Anywhere on skin and oral mucosa	Single or multiple papillary lesions, with thick, white keratinized surfaces containing many pointed projections; cauliflower lesions covered with normal-colored mucosa or multiple pink or pale bumps (focal epithelial hyperplasia)	Lesions grow rapidly and spread
Herpangina (coxsackievirus A; also possibly coxsackievirus B and echovirus)	Oral mucosa, pharynx, tongue	Sudden onset of fever, sore throat, and oropharyngeal vesicles, usually in children under 4 years, during summer months; diffuse pharyngeal congestion and vesicles (1 to 2 mm), grayish-white surrounded by red areola; vesicles enlarge and ulcerate	Incubation period 2 to 9 days; fever for 1 to 4 days; recovery uneventful
Hand, foot, and mouth disease (type A coxsackieviruses)	Oral mucosa, pharynx, palms, and soles	Fever, malaise, headache with oropharyngeal vesicles that become painful, shallow ulcers	Incubation period 2 to 18 days; lesions heal spontaneously in 2 to 4 weeks
Primary HIV infection	Gingiva, palate, and pharynx	Acute gingivitis and oropharyngeal ulceration, associated with febrile illness resembling mononucleosis and including lymphadenopathy	Followed by HIV seroconversion, asymptomatic HIV infection, and usually ultimately by HIV disease

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Bacterial or fungal diseases			
Acute necrotizing ulcerative gingivitis ("trench mouth," Vincent's infection)	Gingiva	Painful, bleeding gingiva characterized by necrosis and ulceration of gingival papillae and margins plus lymphadenopathy and foul odor	Continued destruction of tissue followed by remission, but may recur
Prenatal (congenital) syphilis	Palate, jaws, tongue, and teeth	Gummatous involvement of palate, jaws, and facial bones; Hutchinson's incisors, mulberry molars, glossitis, mucous patches, and fissures of corners of mouth	Tooth deformities in permanent dentition irreversible
Primary syphilis (chancre)	Lesion appears where organism enters body; may occur on lips, tongue, or tonsillar area	Small papule developing rapidly into a large, painless ulcer with indurated border; unilateral lymphadenopathy; chancre and lymph nodes containing spirochetes; serologic tests positive by third to fourth week	Healing of chancre in 1 to 2 months, followed by secondary syphilis in 6 to 8 weeks
Secondary syphilis	Oral mucosa frequently involved with mucous patches, primarily on palate, also at commissures of mouth	Maculopapular lesions of oral mucosa, 5 to 10 mm in diameter with central ulceration covered by grayish membrane; eruptions occurring on various mucosal surfaces and skin accompanied by fever, malaise, and sore throat	Lesions may persist from several weeks to 1 year
Tertiary syphilis	Palate and tongue	Gummatous infiltration of palate or tongue followed by ulceration and fibrosis; atrophy of tongue papillae produces characteristic bald tongue and glossitis	Gumma may destroy palate, causing complete perforation
Gonorrhea	Lesions may occur in mouth at site of inoculation or secondarily by hematogenous spread from a primary focus elsewhere	Earliest symptoms are burning or itching sensation, dryness, or heat in mouth followed by acute pain on eating or speaking; tonsils and oropharynx most frequently involved; oral tissues may be diffusely inflamed or ulcerated; saliva develops increased viscosity and fetid odor; submaxillary lymphadenopathy with fever in severe cases	Lesions may resolve with appropriate antibiotic therapy
Tuberculosis	Tongue, tonsillar area, soft palate	A solitary, irregular ulcer covered by a persistent exudate; ulcer has an undermined, firm border	Lesions may persist
Cervicofacial actinomycosis	Swellings in region of face, neck, and floor of mouth	Infection may be associated with an extraction, jaw fracture, or eruption of molar tooth; in acute form resembles an acute pyogenic abscess, but contains yellow "sulfur granules" (gram-positive mycelia and their hyphae)	Acute form may last a few weeks; chronic form lasts months or years; prognosis excellent; actinomycetes respond to antibiotics (tetracyclines or penicillin) but not antifungal drugs
Histoplasmosis	Any area in mouth, particularly tongue, gingiva, or palate	Numerous small nodules may ulcerate; hoarseness and dysphagia may occur because of lesions in larynx usually associated with fever and malaise	May be fatal
Candidiasis	Any area of oral mucosa	Pseudomembranous form has white patches that are easily wiped off leaving red, bleeding, sore surface; erythematous form is flat and red; rarely, candidal leukoplakia appears as white patch in tongue that does not rub off; angular cheilitis due to <i>Candida</i> involves sore cracks and redness at angle of mouth; <i>Candida</i> seen on KOH preparation in all forms	Responds to antifungals

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Dermatologic diseases			
Mucous membrane pemphigoid	Primarily mucous membranes of the oral cavity, but may also involve the eyes, urethra, vagina, and rectum	Painful, grayish-white collapsed vesicles or bullae with peripheral erythematous zone; gingival lesions desquamate, leaving ulcerated area	Protracted course with remissions and exacerbations; involvement of different sites occurs slowly; glucocorticoids may temporarily reduce symptoms but do not control the disease
Erythema multiforme (Stevens-Johnson syndrome)	Primarily the oral mucosa and skin of hands and feet	Intraoral ruptured bullae surrounded by an inflammatory area; lips may show hemorrhagic crusts; the "iris," or "target" lesion, on the skin is pathognomonic; patient may have severe signs of toxicity	Onset very rapid; condition may last 1 to 2 weeks; may be fatal; acute episodes respond to steroids
Pemphigus vulgaris	Oral mucosa and skin	Ruptured bullae and ulcerated oral areas; mostly in older adults	With repeated recurrence of bullae, toxicity may lead to cachexia, infection, and death within 2 years; often controllable with steroids
Lichen planus	Oral mucosa and skin	White striae in mouth; purplish nodules on skin at sites of friction; occasionally causes oral mucosal ulcers and erosive gingivitis	Protracted course, may respond to topical steroids
Other conditions			
Recurrent aphthous ulcers	Anywhere on nonkeratinized oral mucosa (lips, tongue, buccal mucosa, floor of mouth, soft palate, oropharynx)	Single or clusters of painful ulcers with surrounding erythematous border; lesions may be 1 to 2 mm in diameter in crops (herpetiform), 1 to 5 mm (minor), or 5 to 15 mm (major)	Lesions heal in 1 to 2 weeks but may recur monthly or several times a year; topical steroids give symptomatic relief; systemic glucocorticoids may be needed in severe cases; a tetracycline oral suspension may decrease severity of herpetiform ulcers
Behçet's syndrome	Oral mucosa, eyes, genitalia, gut, and central nervous system	Multiple aphthous ulcers in mouth; inflammatory ocular changes; ulcerative lesions on genitalia; inflammatory bowel disease and CNS disease	Ulcers may persist for several weeks and heal without scarring
Traumatic ulcers	Anywhere on oral mucosa; dentures frequently responsible for ulcers in vestibule	Localized, discrete ulcerated lesion with red border; produced by accidental biting of mucosa, penetration by a foreign object, or chronic irritation by a denture	Lesions usually heal in 7 to 10 days when irritant is removed, unless secondarily infected

Source: Greenspan, in Fauci et al. 1998. Harrison's principles of internal medicine. Reprinted by permission from McGraw-Hill (2000). Copyright 2000 by McGraw-Hill.