DermNet NZ

Authoritative facts about the skin from the New Zealand Dermatological Society Incorporated.

Oral lichen planus

What is oral lichen planus?

Oral lichen planus is lichen planus inside the mouth.

Lichen planus is a chronic inflammatory skin condition affecting about 1-2% of the general adult population. It usually affects adults older than 45 years, although it may affect younger adults and children. It is more common in women than in men (1.4: 1).

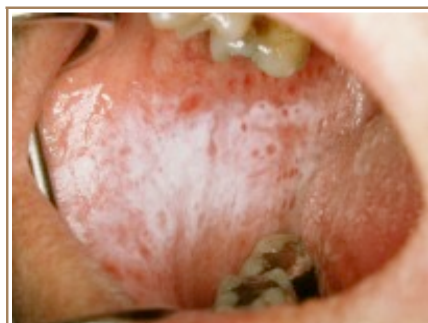
Oral lichen planus affects 50% of patients and often occurs without skin lesions elsewhere.

Clinical features of oral lichen planus

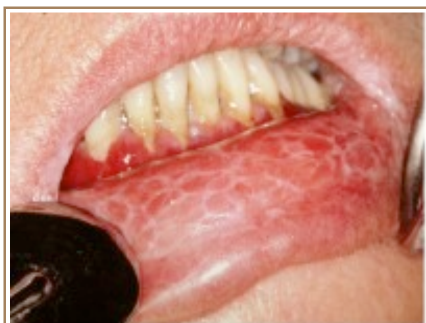
Oral lichen planus may present in the following forms.

Form	Features
Atrophic lichen planus	• Red lesions often with a whitish border • Can resemble lupus erythematosus • May cause erosions
Reticular lichen planus	• Symmetrical white lace-like pattern on buccal mucosa (inner aspects of cheeks) • May affect tongue or gums
Erosive lichen planus	• Irregular, often widespread persistent erosions • Usually in the buccal mucosa or lips • Can be very painful
Plaque type	• Usually seen in smokers • Confluent white patches similar to oral keratoses

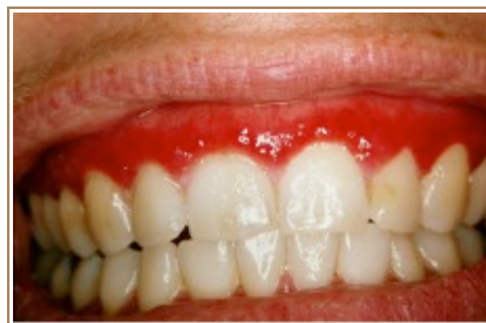
Oral lichen planus



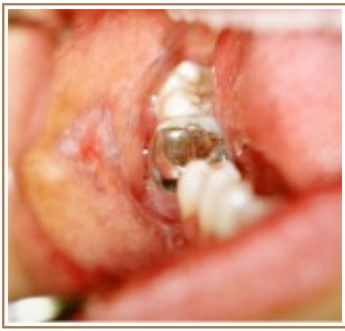
Plaque lichen planus

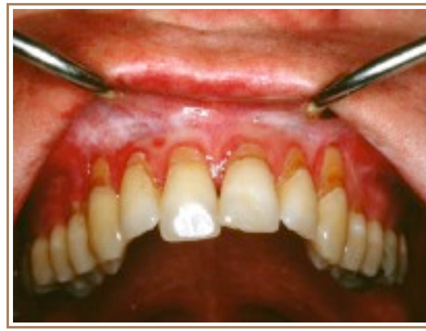


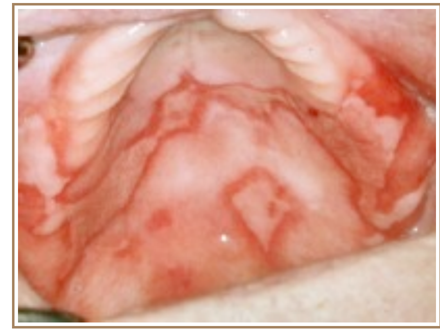
Reticular lichen planus

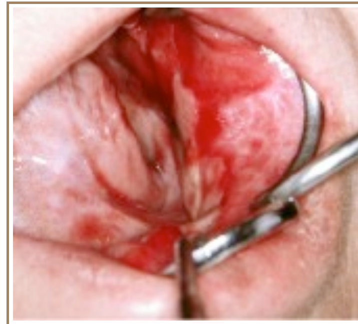


Erosive lichen planus


Lichenoid reaction to amalgam


Graft versus host disease


Lichenoid drug reaction


Ulcerative lichen planus

Images supplied by Dr David Hay, Auckland

What is the cause of oral lichen planus?

The precise cause of oral lichen planus is unknown. It appears to be an autoimmune disease in which cells called CD8+ T lymphocytes, and chemical mediators such as the cytokine TNF, attack the oral epithelial cells resulting in their death by apoptosis.

In most cases the disease appears unexpectedly and is called idiopathic oral lichen planus. In other cases it may be precipitated by the following:

- Drugs i.e. lichenoid drug reaction, most often ….
- Contact allergens in dental restorative materials or toothpastes, identified by careful patch testing
- Mechanical trauma (Koebner phenomenon)
- Viral infection, particularly HPV and HHV6
- Liver disease, particularly associated with Hepatitis C

Oral lichenoid lesions are also part of the spectrum of chronic graft-versus-host disease that occurs after bone marrow transplantation.

Pathological features

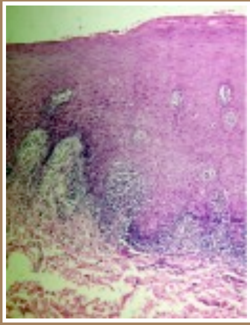
The microscopic criteria used to diagnose lichen planus from a skin biopsy include:

- Thickened horny layer (hyperkeratosis)
- Dying skin cells at the basal layer of the epithelium (vacuolisation and apoptotic keratinocytes)
- T-lymphocytes and histiocyte inflammatory cells at the junction between the epithelium and its underlying connective tissue (interface dermatitis).

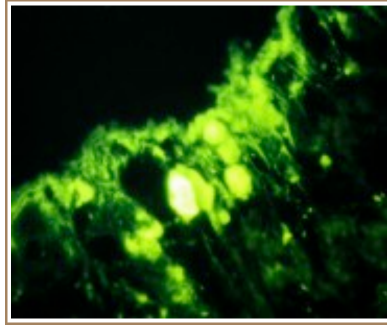
With time the epithelium undergoes gradual remodelling, resulting in reduced thickness and sometimes having a saw-tooth pattern. The interface inflammation is often very dense. T cells may also be found within the epithelium. The majority of lymphocytes in the infiltrate are memory cells, identified using special stains (histochemistry) by positive CD8 and CD45 RO markers.

Fibrinogen is found in the basement membrane zone using the direct immunofluorescence test in 90 to 100% of cases. Occasionally, immunoglobulins and complement factors may be found as well. The immunofluorescence pattern is not diagnostic as the same reactants can also be seen in systemic lupus erythematosus (SLE) and erythema multiforme.

The pathology of lichen planus



Lichenoid inflammation



Positive immunofluorescence – globular bodies and fibrinogen

Complications

Oral lichen planus can be very painful and deep erosions may lead to scarring.

Lichen planus may rarely lead to oral cancer (squamous cell carcinoma). Persistent ulcers and enlarging nodules should undergo biopsy with this possibility in mind, particularly in those using topical or systemic immune suppressive agents.

Management

It is important to identify and remove any potential agent that might have caused a lichenoid reaction, such as drugs that have been started in recent months and contact allergens identified by patch testing.

Most people get satisfactory control of symptoms with the following measures:

- Meticulous oral hygiene
- Stop smoking
- Topical steroids as drops, pastes, gels or sprays
- Steroid injections (intralesional triamcinolone)
- Mouth rinse containing the calcineurin inhibitors, ciclosporin or tacrolimus

In severe cases systemic corticosteroids may be used.

Other possible therapeutic agents may include:

- Thalidomide
- Systemic retinoids (acitretin or isotretinoin)
- Griseofulvin
- Azathioprine
- Cyclophosphamide
- Dapsone
- Metronidazole
- Low molecular weight heparin

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Related information

References:

On DermNet NZ:

- Lichen planus

Other websites:

Books about skin diseases:

See the DermNet NZ bookstore

Author: Kim Gear

DermNet does not provide an on-line consultation service.
If you have any concerns with your skin or its treatment, see a dermatologist for advice.

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