* Dental manifestations of skin diseases. Lichen planus. Herpes infection of the skin and mucous membranes. Pemphigus. Erythema multiforme. Precancerous mouth and mucous membranes.

*Bullous dermarosis Classification:

*1. Pemphigus Vera(acantholytic):

- Pemphigus vulgaris
- Pemphigus vegetans
- Pemphigus foliaceus
- Pemphigus seborheal

*2. Nonacantholytic pemphigus of oral mucosa

* 3. Pemphogoids:
- Bullous pemphogoid
- Cicatricial pemphogoid
- Pemphogoid gestationis

* 4. Dermatitis herpetiformis
- Duhring disease
- Sneddon-Wilkinson

* 5. Genetic bullous dermatosis
- Hialey-Hialey disease
- Group of bullous epidermolysis

Pemphigus Vera is autoimmune disease which declares itself as elaboration on uninflamed skin and mucous coats of bulla being developmental as a result of acantholysis and generalized for whole skin integument without appropriate treatment

Pemphigus can occur at any age, but it's most often seen in people who are middle-aged or older. It tends to be a long-lasting (chronic) condition, and some types can be life-threatening without treatment. Treatment with medication usually controls it.

*Pathogenesis

* The pathogenesis underlying all forms of pemphigus involves the development of autoantibodies to the desmosomal proteins, which can be found in many areas of the body, but which play a major role in the epidermal layers of the integumentary system.
* Pemphigus vulgaris (PV), pemphigus foliaceus (PF) are caused primarily by antibodies to desmoglein 1 (Dsg 1) in PF, desmoglein 3 (Dsg 3) in mucosal dominant PV, or both in mucocutaneous PV. Dsg 1 and 3 are found in varying amounts in the epidermis of the skin and mucosa.

Pathogenesis

* Dsg 1 is found in higher amounts in the upper layers of the epidermis, especially on the skin, while Dsg 3 is found in the lower layers of the epidermis with higher concentrations in the mucosa and skin.2,6 It is this variability in distribution which explains the 3 distinct clinical diseases.
* The disease usually occurs in patients with certain HLA genotypes who generate B-cells responsible for the specific autoantibodies. The activation of these B-cells requires a complex interaction with CD4+ T helper 2 (Th2) cells and it is this Th2 cell over-activation that leads to the autoantibody production that is necessary for PV and PF

Pathogenesis

* Th2 cells are known for secreting multiple interleukins (IL), of which IL-4 plays a major role in pemphigus and the humoral immune response.2 IL-4 promotes antibody production by primed B cells and an isotype switching from IgG1 to IgG4 antibodies which have been shown to be important in the active form of PF and PV.
* Interaction of autoimmune antibodies with DSG1 and DSG3 leads to acantholysis (breaking of between keratinocytes) resulting in formation of clefts filled up with subcutaneous water inside the epidermis end mucous coats and appearance of bulls.

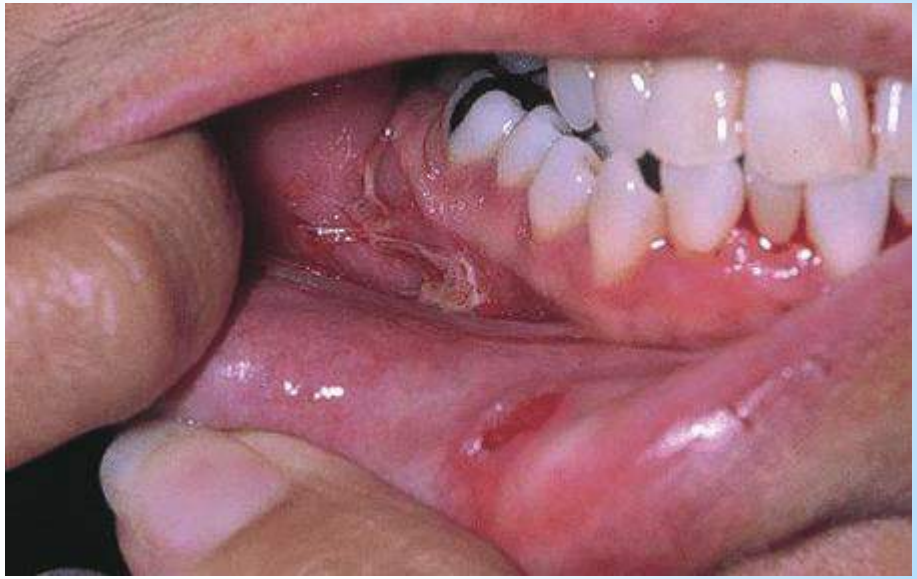
Clinical findings

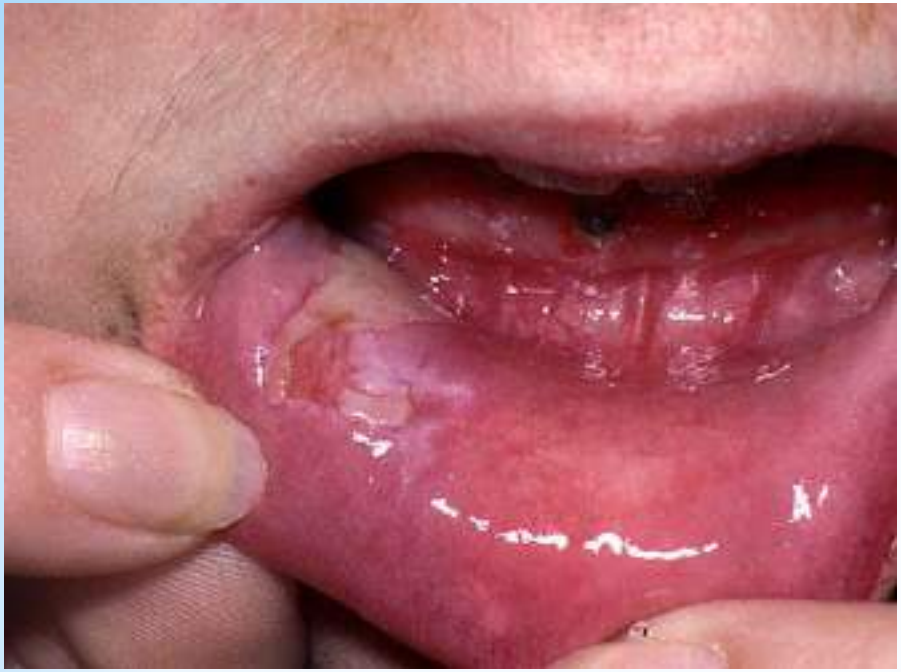
Pemphigus vulgaris occurs often in compares with other type. The blisters usually develop in the mouth first, before affecting the skin a few weeks or months later.

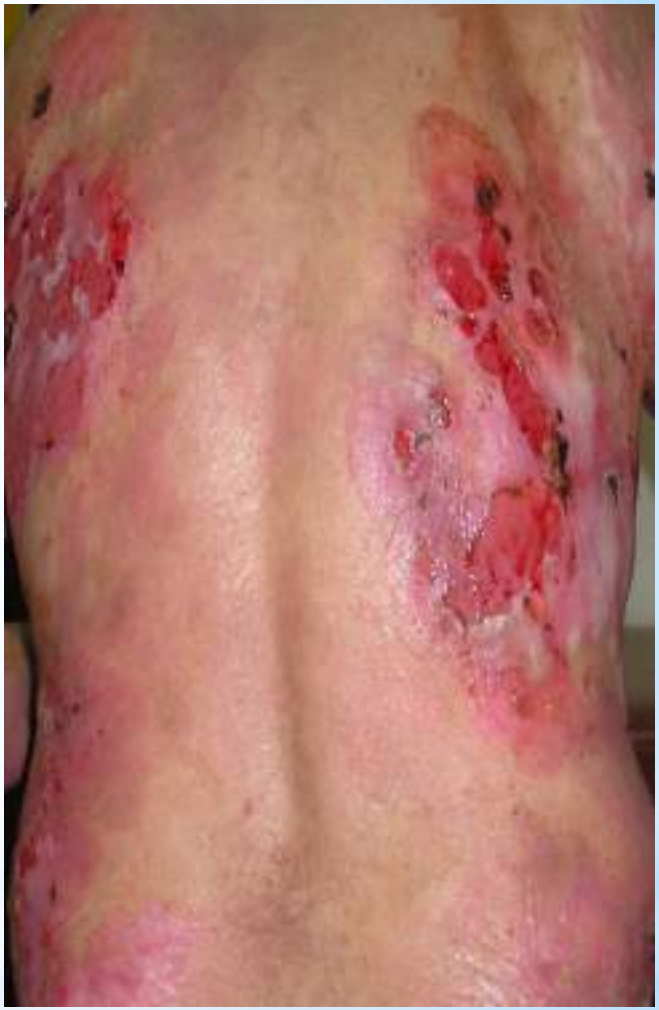
- The blisters typically are painful but don't itch. Blisters in the mouth often turn into painful sores, which can make eating, drinking and brushing teeth very difficult. The voice can become hoarse if the blisters spread to the voice box (larynx).
- Sores on the skin can join together to form large areas of painful, raw-looking skin, before crusting over and forming scabs. They don't usually leave any scars, although affected skin can occasionally become permanently discoloured.

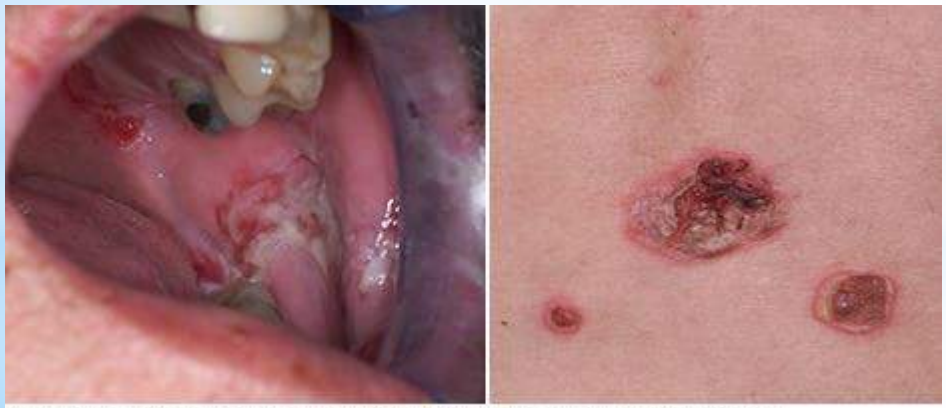
- As well as getting blisters in the mouth, they can also develop in other areas of the digestive system's soft tissue lining, including the nose, throat, anus, genitals and vagina. The thin membrane that covers the front of the eye and inside of the eyelids (conjunctiva) can also be affected.

- There may be times when the blisters are severe (flare-ups), followed by periods when they heal and fade (remission). It's impossible to predict when this might happen and how severe the flare-ups will be.









* **Pemphigus foliaceus** is part of the pemphigus group of autoimmune diseases.
* Lesions commonly begin on the trunk, but may also originate as localized lesions on the face or scalp. The patient may be unaware of the blisters because they rupture very easily. In these cases, there may only be a history of superficial sores or areas of crusting. Pain and/or a burning sensation localized to the areas of the lesions may be noted. Unlike pemphigus vulgaris (PV), there is typically no history of oral or other mucosal lesions. The lesions may become widespread.

Symptoms of PF include:

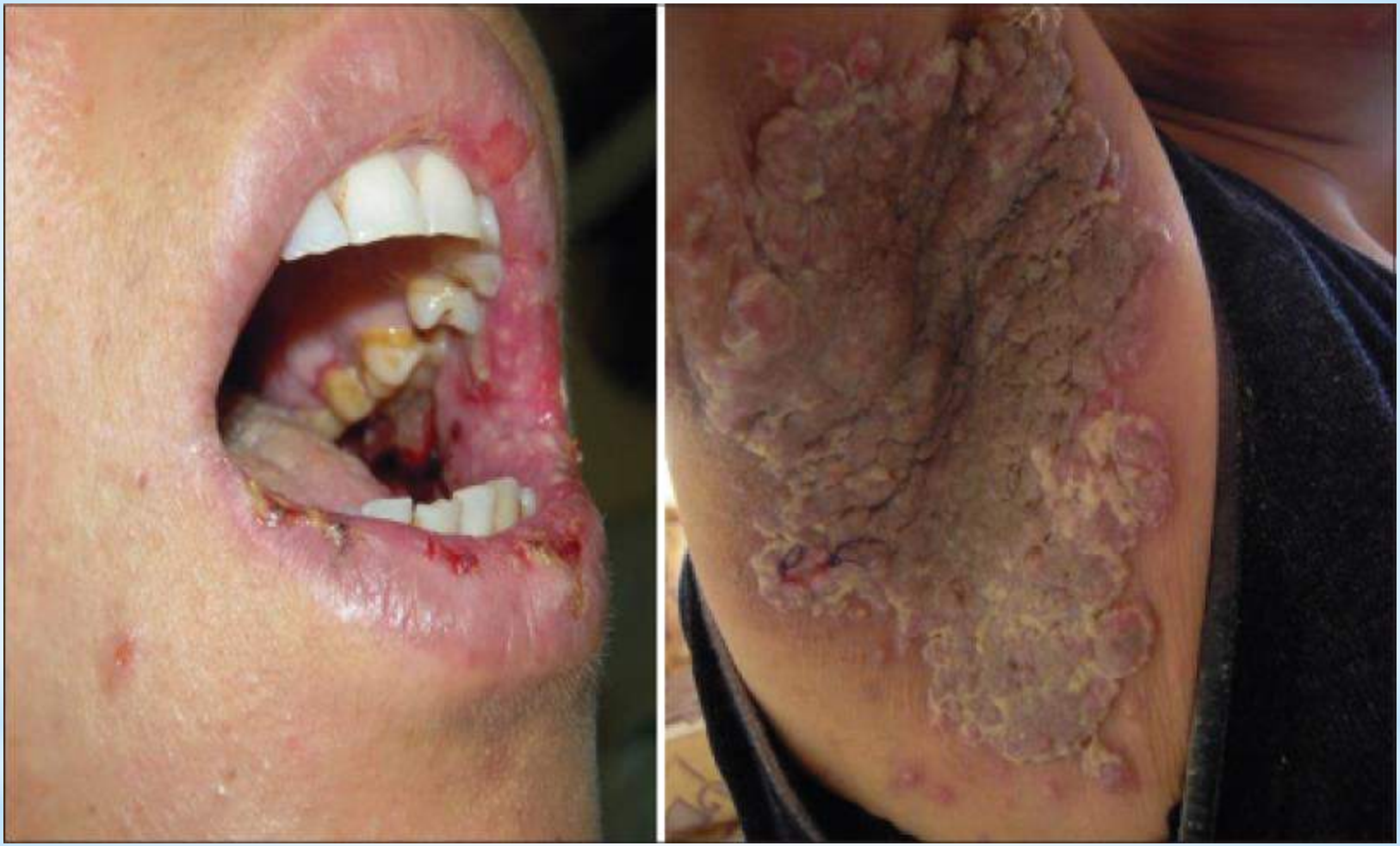
- Small fluid-filled skin blisters that typically begin on the face, scalp, or trunk.
- Ruptured blisters that cause sores, pockets, or scars in the skin.
- Scaly, inflamed, painful patches on the skin. These patches occur after blisters burst. Some people may only notice symptoms after the blisters burst.
- Burning, pain, and itching at the site of the blisters.
- Chronic skin infections due to ruptured and irritated blisters.

*Signs of a skin infection include:

* pus at a skin wound
* intense pain at the site of a blister
* red streaks out of a wound or blister
* fever
* exhaustion
* nausea

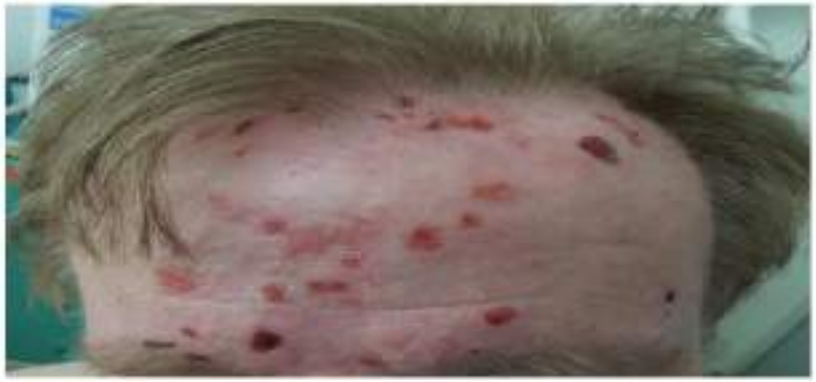
*Pemphigus vegetans

* is a rare verrucous variant of pemphigus vulgaris, affecting intertriginous areas.
* Two variants of pemphigus vegetans have been recognized.772 In the Neumann type the initial lesions are vesicular and erosive, resembling pemphigus vulgaris, but the lesions progressively evolve into vegetating plaques. The less common Hallopeau type commences with pustular lesions and has a relatively benign course with few, if any, relapses
* Oral lesions are almost invariably present in pemphigus vegetans
* On the bottom we may see vegetation



Seborrheic pemphigoid (SP)

- is a peculiar variant of BP which clinically resembles pemphigus erythematosus (known also as seborrheic pemphigus), since it is characterized by ruptured bullae and erosions covered with crusts involving the seborrheic areas (face, hair part of the head, cervix, dorsum)
- Spots and soft surface bulla with thin tegmentum which are fast-transformed into scaly crusts
- After crusts being removed the wet eroded surface is open



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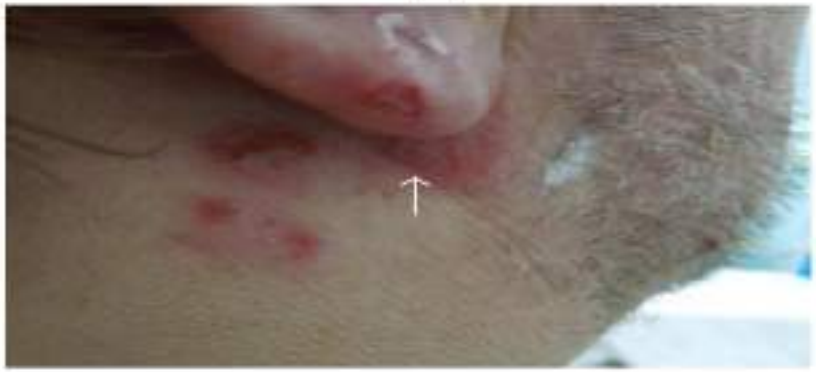

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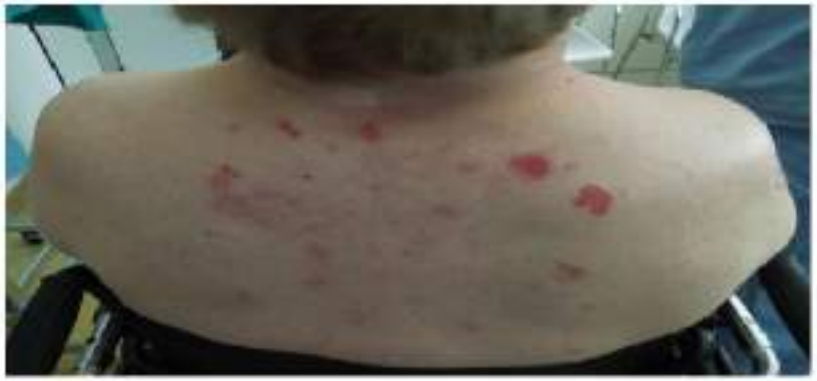

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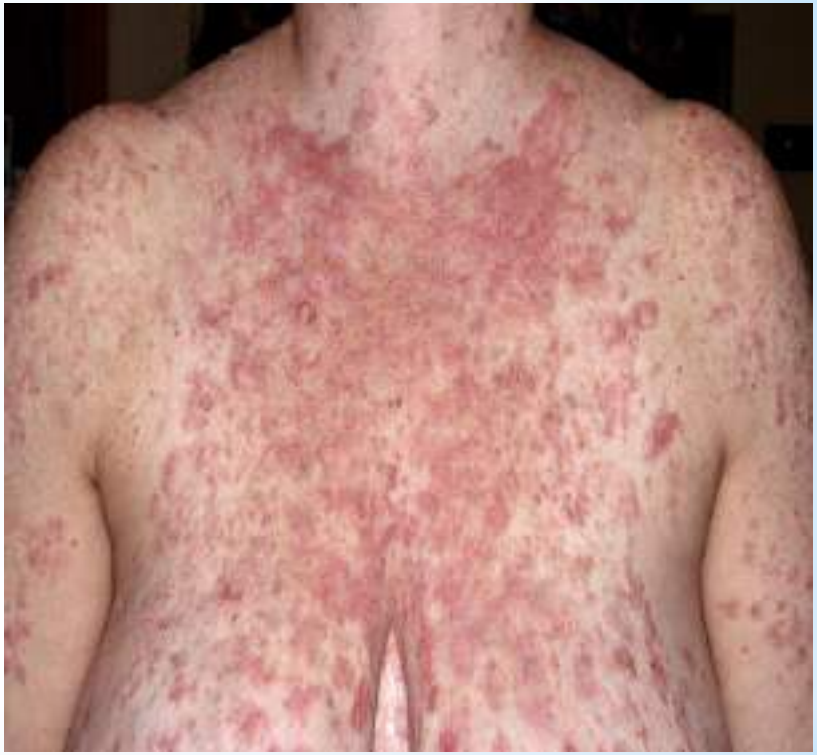


*Diagnostic

- Typical clinical presentation — visual examination of skin lesions

* Nikolsky's sign is a clinical dermatological sign, named after Pyotr Nikolsky (1858–1940), a Russian physician who trained and worked in the Russian Empire. Nikolsky sign is a skin finding in which the top layers of the skin slip away from the lower layers when rubbed.
* Asboe-Hansen sign. Pushing the bulla leads to increasing of its square
* Lesion biopsy — a sample of the blistered skin is removed and examined under the microscope. Additionally, the layer of skin in which cell-to-cell separation occurs can be determined.
*

* Direct immunofluorescence — the skin sample is treated to detect desmoglein antibodies in the skin. The presence of these antibodies indicates pemphigus.
* Indirect Immunofluorescence or antibody titer test. This measures desmoglein autoantibodies in the blood serum. It may be used to obtain a more complete understanding of the course of the disease.
* ELISA A serum assay for desmoglein antibodies, known as ELISA, is also available. Although in many cases there is a correlation between ELISA and disease activity it is not so in every case.

* Nikolsky sign
* Nikolsky sign is a skin finding in which the top layers of the skin slip away from the lower layers when rubbed.

* Considerations
* Your health care provider may use a pencil eraser or finger to test for Nikolsky sign. The skin is pulled to the side with a shearing pressure on the surface, or by rotating the eraser back and forth.

* If the test result is positive, the very thin top layer of skin will shear off, leaving skin pink and moist, and usually very tender.

* A positive result is usually a sign of a blistering skin condition. People with a positive sign have loose skin that slips free from the underlying layers when rubbed.
* Lesion biopsy — a sample of the blistered skin is removed and examined under the microscope. Additionally, the layer of skin in which cell-to-cell separation occurs can be determined.

Treatment

- Eliminating triggers for the infection - some people experience an outbreak during times of stress, so reducing stress may help keep symptoms at bay. Eliminating medications that cause PF may also eliminate the blisters.
- **Hospitalization** - a severe outbreak of P may require hospitalization to reduce the risk of infection or treat an infection that has begun to spread.

* **Corticosteroids.** For people with mild disease, corticosteroid cream may be enough to control it. For others, the mainstay of treatment is an oral corticosteroid, such as prednisone pills.Using corticosteroids for a long time or in high doses may cause serious side effects, including diabetes, bone loss, an increased risk of infection, stomach ulcers and a redistribution of body fat, leading to a round face (moon face).
* **Steroid-sparing immunosuppressant drugs.** Medications such as azathioprine (Imuran, Azasan), mycophenolate (Cellcept) and cyclophosphamide help keep your immune system from attacking healthy tissue. They may have serious side effects, including increased risk of infection.
* **Other medications.** If first-line drugs aren't helping you, your doctor may suggest another drug, such as dapsone, intravenous immunoglobulin or rituximab (Rituxan).

- If the mouth and nose are the only involvement, treatment should be limited to topical steroids, intralesional steroid injections, or occasional short bursts of oral corticosteroids.

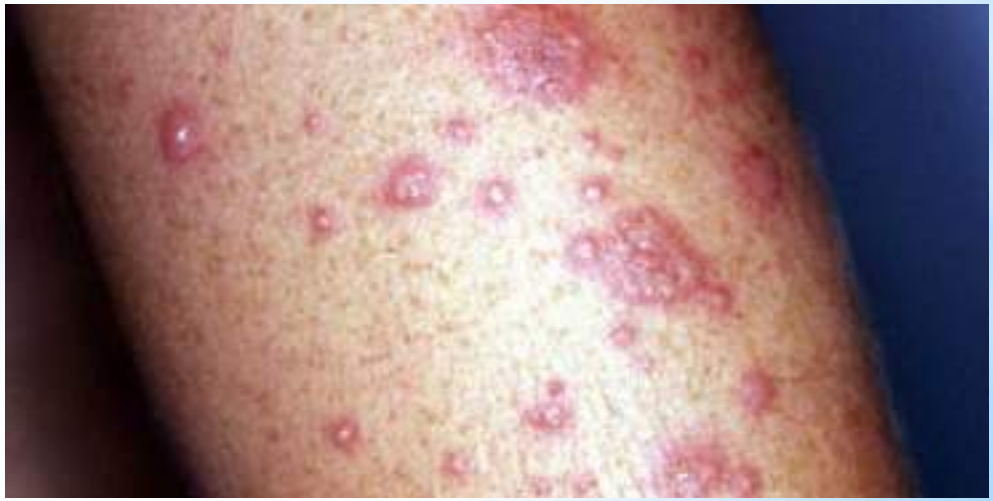
- If only the gums are involved, topical therapy applied with flexible dental trays (similar to the disposable molds used to deliver fluoride treatments to the teeth).

*Lifestyle and home remedies

- **Follow your doctor's wound care instructions.** Taking good care of your wounds can help prevent infection and scarring. Your doctor may have recommendations for over-the-counter creams that help control pain.
- **Gently wash your skin.** Use mild soap and apply moisturizer afterward.
- **Protect your skin.** Avoid activities that may hurt the skin.
- **Avoid certain foods.** Blisters in your mouth could be triggered or irritated by spicy, hot or abrasive foods.
- **Minimize sun exposure.** Ultraviolet light may trigger new blisters.
- **Talk with your dentist about maintaining good oral health.** If you have blisters in your mouth, it may be difficult to brush your teeth properly. Ask your dentist what you can do to protect your oral health.

*Erythema multiphorme

* Erythema multiphorme – disease of skin based on damage of dermis vesicle, abruptly progressed and characterized by polymorphism of rash, cyclic anticipated course in form of strongly expressed target type exanthema with specific badge-typed papules, often damage of oral mucosa and genital organs in form of bulla.



*What causes erythema multiforme?

* The cause of erythema multiforme is not fully understood. It is most likely a skin directed immune reaction which occurs following exposure to a trigger in certain 'predisposed' individuals.
* The most common triggers are infection, in around 90% of cases, and medications in less than 10% of cases.
* The most commonly associated infection is herpes simplex virus (the cold sore virus). An uncommon bacterial infection called mycoplasma pneumoniae is the most common bacterial trigger to have been identified. Many other viral, bacterial and fungal infections have been implicated.
* Medications are an uncommon trigger of erythema multiforme. When medications are the trigger it is more likely that an individual will develop erythema multiforme major. Drugs which have been identified as precipitating EM include non-steroidal anti-inflammatory drugs (given for joint and muscle pain), antibiotics and anticonvulsants (used to treat epilepsy).

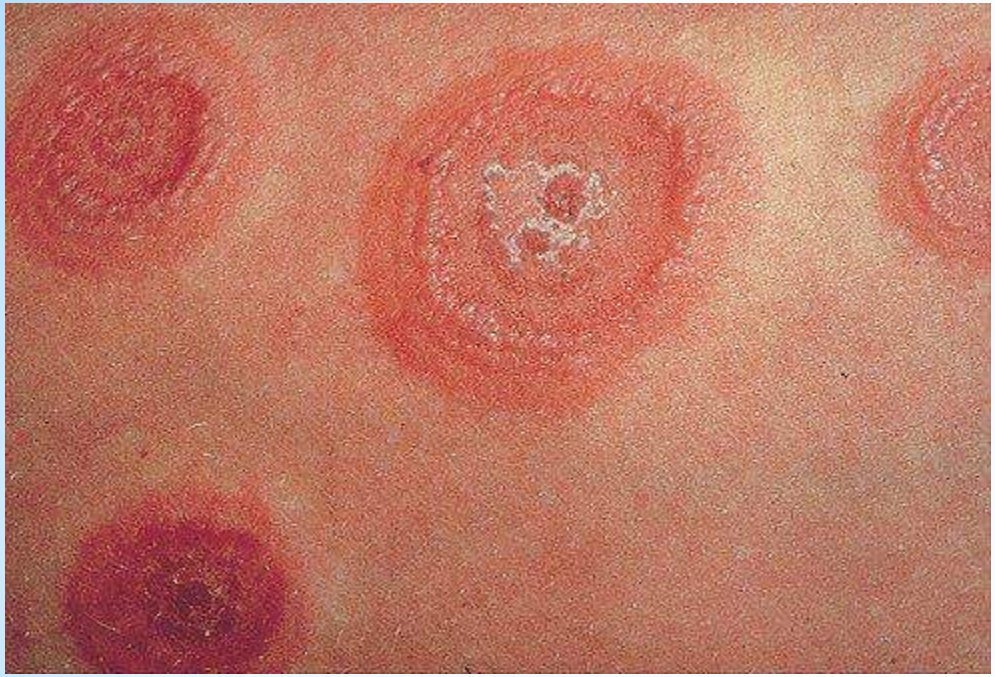
* Erythema multiforme (EM) is a hypersensitivity reaction which tends to develop abruptly. Usually it will disappear on its own, but sometimes treatment may be required for the symptoms. It occurs in all racial groups and is predominantly observed in young adults (20-40 years), but can occur in any age group. The condition is slightly more common in men.

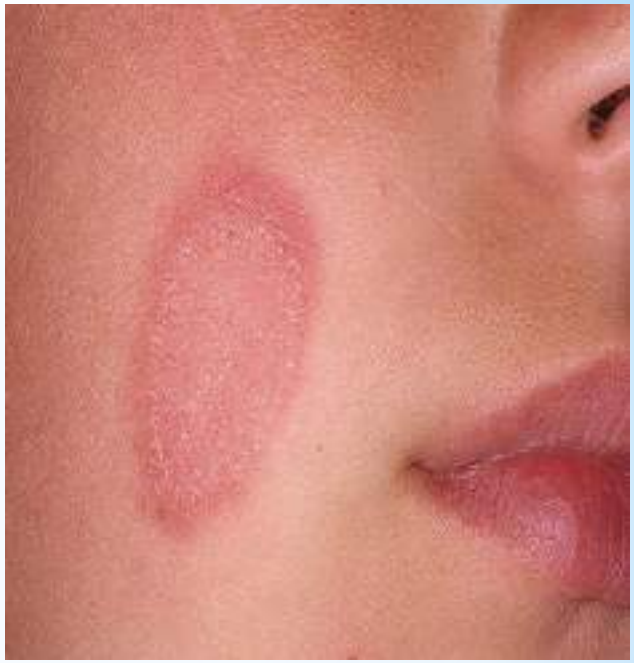
What are the symptoms of erythema multiforme?

* Erythema multiforme is characterised by the sudden development of few to hundreds of red papules (spots). The papules usually begin over the back of the feet and hands, and spread upwards towards the trunk. The face is often involved. The hands and arms are more commonly affected than the feet and legs. Over time these papules evolve to plaques (raised patches) and then typical target shaped lesions. These target lesions have a dusky red centre, a paler area around this, and then a dark red ring round the edge. Sometimes the centre of the target can be crusted or blistered. The targets can be different shapes and sizes, hence the latin name: erythema (redness) multi (many), forme (shapes). Erythema multiforme is usually mild - 'erythema multiforme minor' – with only skin involvement, causing little trouble and clearing quickly. There is also a rare but more severe type, 'erythema multiforme major', which has similar skin features to EM minor,

*In erythema multiforme minor:

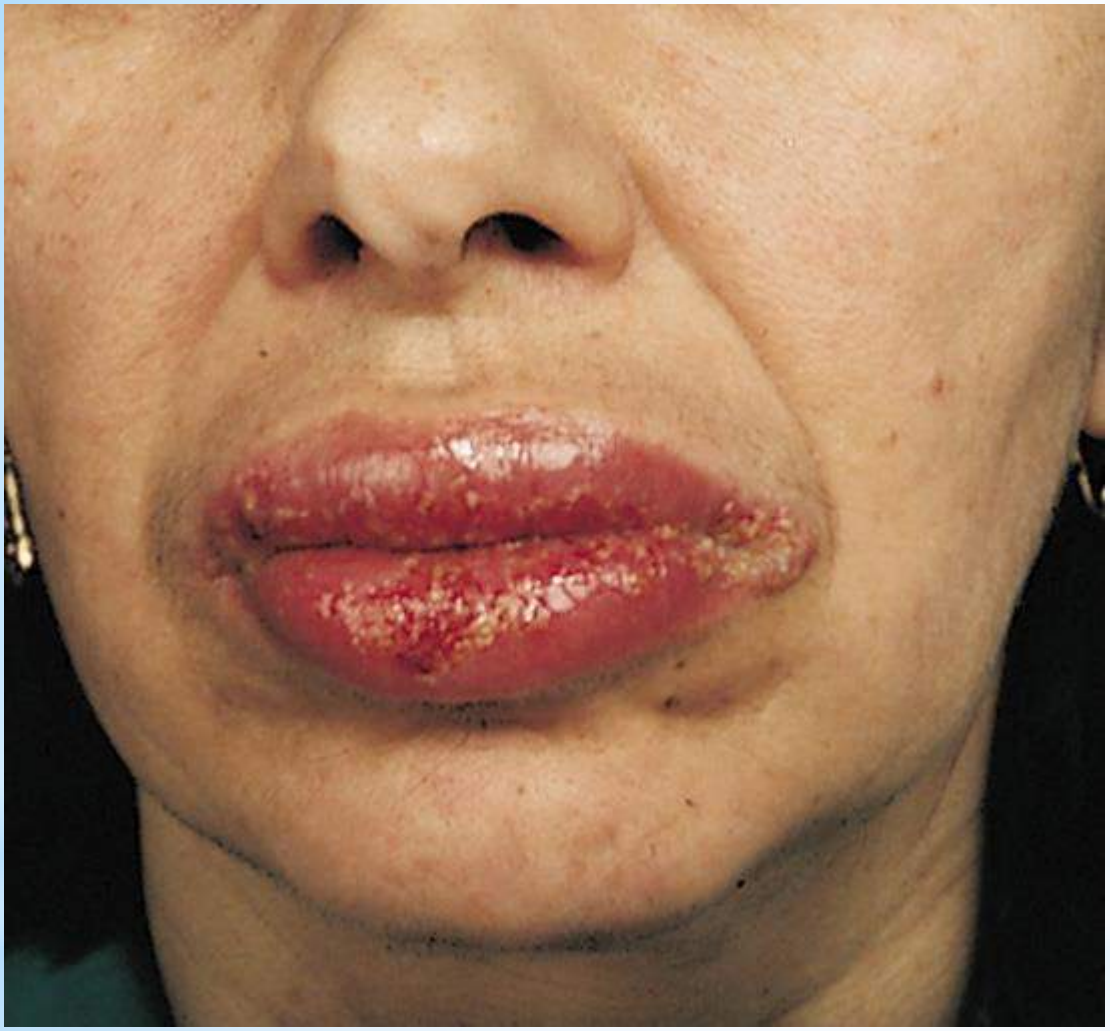
- The spots usually develop over the course of 3 - 4 days, starting on the hands and feet, and then spreading up the limbs to the trunk and face.
- At first the spots are small, round, slightly raised red areas, some of which turn into the ‘target lesions’ described above. These are 1 - 3 cm (0.3 - 1 inches) across, but may fuse together to produce larger areas. Small blisters form in the centre of some of the targets.
- The rash usually fades over 2 - 4 weeks.
- There are usually no complications from this type of erythema multiforme.
- Recurrences are common in some individuals, especially where herpes simplex virus is the trigger.

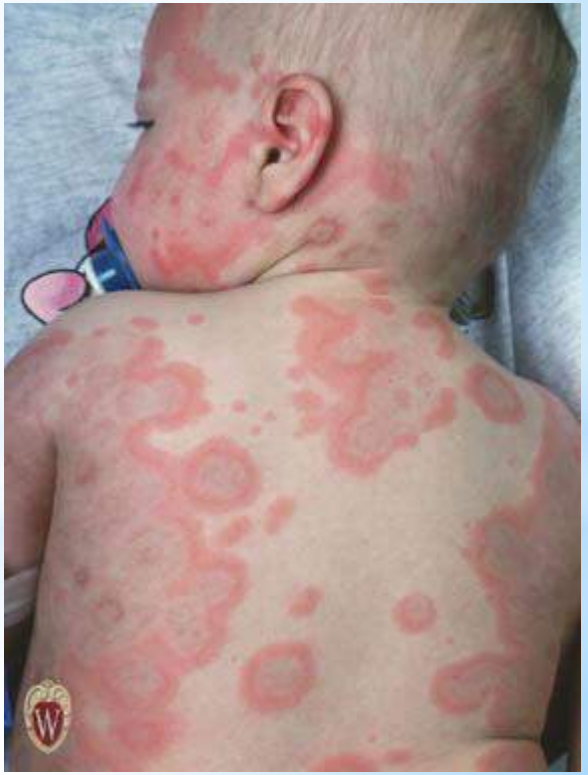




*In erythema multiforme major:

- Patients feel ill and have a high temperature.
- The spots are usually larger, and run into each other more than those of erythema multiforme minor. ‘Target lesions’ can usually still be seen.
- Large blisters may form, and then burst to leave red oozing areas.
- Your lips may be covered with crusts, large raw areas may appear inside your mouth, and your eyes may swell up and turn red.
- Complications are rare and are mainly from scars of the mucous membranes in the mouth or the eyes.





*How is erythema multiforme diagnosed?

* There are no specific blood tests for erythema multiforme. The diagnosis is usually made by identifying the characteristic rash on the skin and a story of recent exposure to one of the known triggers discussed above. Occasionally it is necessary to do a skin biopsy (to remove a small sample of skin under a local anaesthetic) to confirm the diagnosis under the microscope and exclude other possibilities.

*How can erythema multiforme be treated?

* Mild rashes will clear up in a few weeks spontaneously, though moisturisers and topical corticosteroids can be given to hasten recovery and reduce symptoms of itch or burn.
* Severe rashes can be life threatening. Patients may need to be nursed in hospital, occasionally in a burns unit, using dressings like those needed for an extensive burn. The pain from the raw areas can be severe and regular pain control may be required. The oozing areas can leak large amounts of fluid and this will be monitored and replaced with intravenous fluid through a drip if oral intake is inadequate due to mouth sores. In the absence of infection, oral corticosteroids are sometimes given in the early stages of the eruption. Antibiotics help if the damaged skin is infected. An eye specialist may be needed if the eyes are severely affected.

* Recurrent attacks may be a problem. If they always follow a cold sore and come up several times a year, then it may be worth taking a small daily dose of a drug which is designed to suppress the herpes simplex virus (the virus responsible for cold sores) for several months.