

Actinomyces israelii

It's a filaments Gram- positive rod-shaped bacterium, strict anaerobes or microaerophilic. Live commensally on and within mucosal surface of the mouth, nose, upper respiratory tract, intestine and vagina.

It's common in the gingival crevice with poor dental care. *Actinomyces israelii* can penetrate the normal mucosa only after other organism introduced into the mouth, intestine and surgery wounds.

The most common infection is gingivitis, an inflammatory condition of the gums that affects the supporting structures of the teeth. It is associated with accumulations of bacterial plaque and releases toxins that irritate the gums and cause inflammation, leading to infection and bad breath.

Signs of gingivitis include red, spongy and swollen gums that bleed easily, even during regular tooth brushing. If left untreated, can progress to periodontitis, is a severe gums infection that can lead to tooth loss and damages the soft tissue. Without treatment, can destroy the bone that supports your teeth.

Actinomycosis is a chronic bacterial infection that commonly affects the face and neck and not transmitted between persons. Symptoms occur when the bacteria enter the facial tissues after trauma, surgery or infection.

The disease characterized by formation of abscess, sinus tracts on the surface, painful swellings under the skin with drain pus and scars in the jaw and neck named lumpy jaw, fever, coughing and weights loss.

In other cases, the disease includes the chest (pulmonary actinomycosis) and abdominal wall or even in the women genital tracts (an intrauterine device to prevent pregnancy).

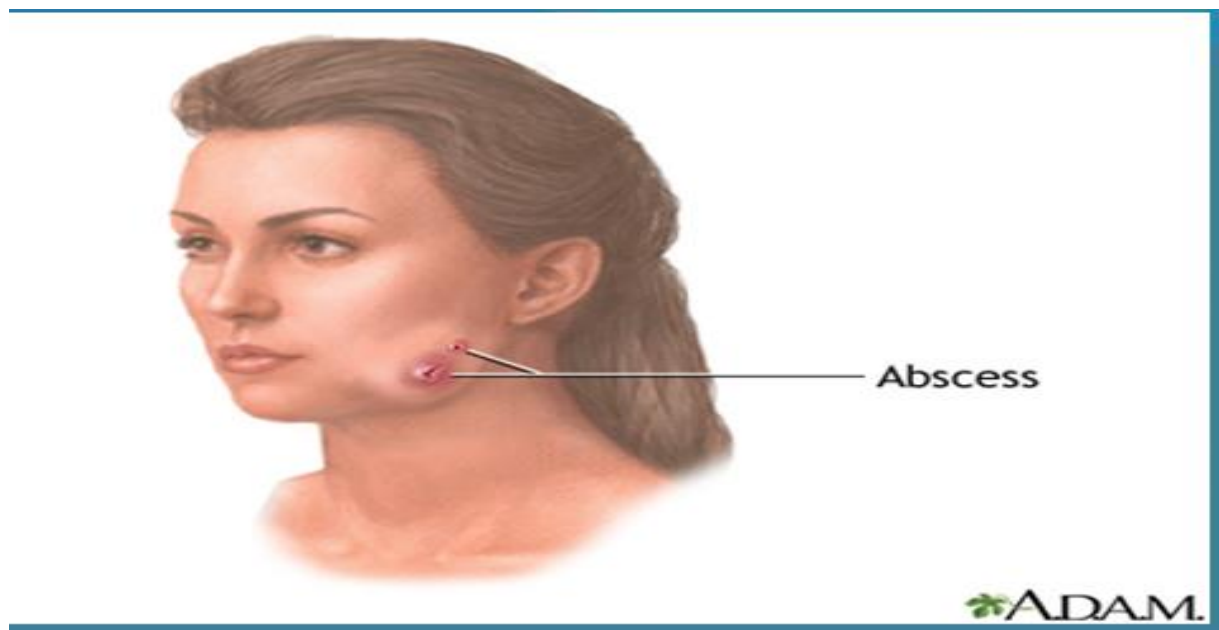
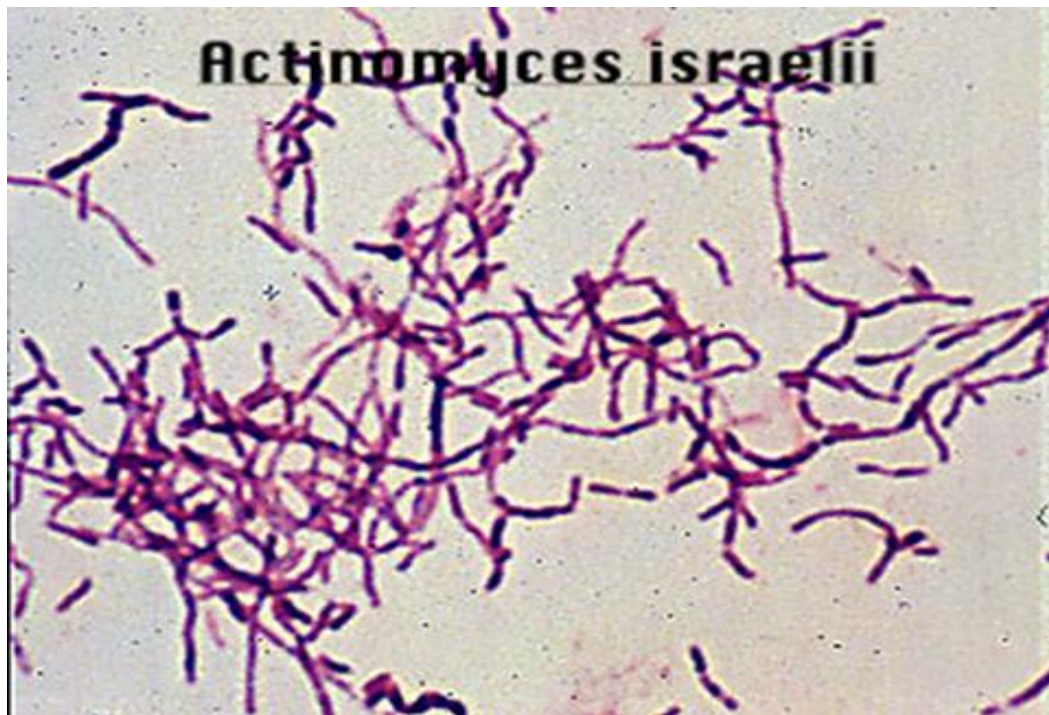
Meningitis can rarely develop.

Actinomycosis is diagnosed by culture of the tissue, pus or sputum to shows sulfur granules as dense yellow colonies. These granules are named due to their appearance, but are not actually composed of sulfur.

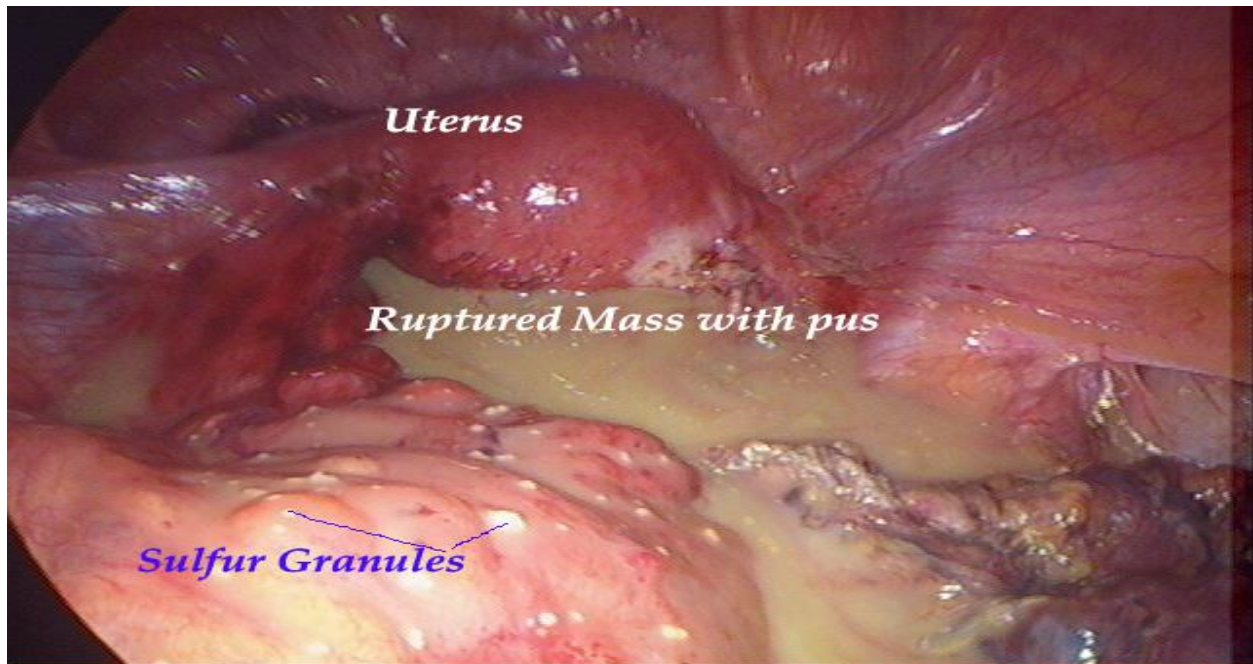
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- **Treatment**

- Its responds to the treatment with penicillin and amoxicillin for several months to a year Erythromycin and tetracycline as alternatives to allergic patients.
- Surgical drainage.
- If the condition is related to an IUD, the device must be removed.
- Good oral hygiene and regular dentist visits may help prevent actinomycosis.
- Always make to brush your teeth at least twice a day, in the morning and at night. Be smart in choosing toothbrush as their textures could differ. Soft bristled toothbrush is highly recommended. When brushing your teeth, don't too hard as it will irritate the swollen gums and may cause bleeding.
- Replace your toothbrush every 3 months.
- Flossing is also a good way to deep clean your teeth and gum line.
- Stop smoking







“Molar tooth” appearance of a colony of *Actinomyces israelii*



Molar teeth colonies on blood agar

