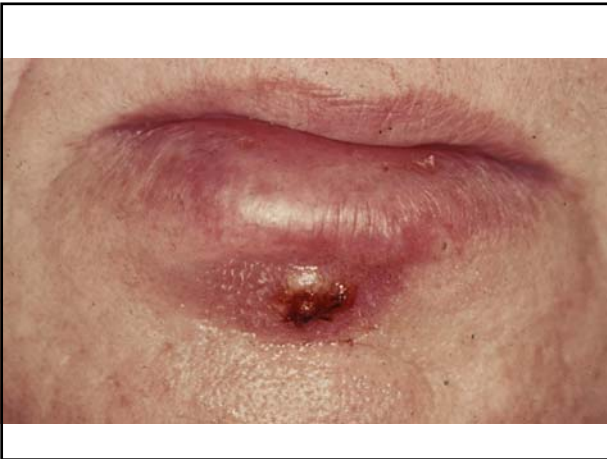


Bacterial Infections

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Impetigo

- *Strep. pyogenes* & *Staph. aureus*
- Young children
- In areas of dermatitis or trauma
- Debilitating patients
- Non-bullous and bullous forms
- Vesicles that are replaced by crusts
- Pruritus, lymphadenopathy
- Can look like exfoliative cheilitis or herpes simplex
- Weakness, fever, diarrhea, rare complications
- Topical or systemic antibiotic treatment
- Amoxicillin (with clavulanic acid); cephalexin, erythromycin (staph resistant to erythromycin)



Erysipelas

- β -hemolytic streptococcus; others less common
 - *Staph aureus*, *strep. Pneumoniae*, *klebsiella*, *haemophilus influenzae*
- Saint Anthony's fire
- Confused with facial cellulitis
- Cheeks, eyelids, nose
- DD: lupus erythematosus, angioedema
- Penicillin, erythromycin





Tonsillitis & Pharyngitis

- Viral or bacterial
- Viral vs. bacterial: conjunctivitis, cough, hoarseness, coryza, ulcerative lesions, diarrhea, viral exanthem
- Bacterial danger: rheumatic fever, acute glomerulonephritis, toxic shock, bacteremia
- Penicillin, clindamycin



Tonsillolithiasis

- Calcified matter in crypts of tonsils packed with bacteria and organic debris
- Children to old adults
- Formation of abscess, dysphagia
- Radiographic identification in panoramic films
- Tonsillectomy

Scarlet Fever

- β -hemolytic streptococcus
- Skin rash
- 3-12 years of age
- White (first 2 days) and red (4-5 days) tongue
- Fever, rash (sunburn with goose pimples; sandpaper texture), Pastia's lines on skin folds
- Desquamation as lesions clear





Diphtheria (Klebs-Löffler disease)

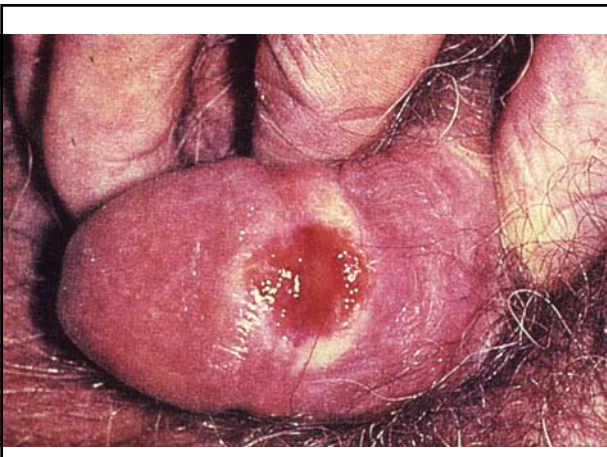
- *Corynebacterium diphtheriae*
- Only in humans
- Lethal exotoxin
- Recent outbreak in Russia!!!!
- Urban poor and Native Americans
- Immunossuppressed patients susceptible
- Areas of necrosis that expand
- Oral involvement (lips, palate, uvula)
- Palatal paralysis due to neuropathy
- Bull neck (edema), airway obstruction

Syphilis

- *Treponema pallidum*
- Sexual contact or mother to fetus
- In U.S. 50-100x higher than in other industrialized countries
- Males=Females
- Three clinical stages
- First two stages highly infective for fetus (miscariage, stillbirth, or congenital malformations)

Primary Syphilis

- **Chancere**
- 3-90 days after contact in the area of inoculation
- Papular lesion that becomes ulcerated
- Heals by itself in 3-8 weeks
- Lymphadenopathy



Secondary Syphilis

- Disseminated
- 4-10 weeks after initial infection
- Can be concomitant with primary
- Systemic symptoms
 - Lymphadenopathy, weight loss, fever, pain
- Diffuse, painless maculopapular rash with hyper/hypo-pigmentation; heals without scarring
- **Mucous patches**
 - Intensely inflamed areas
- **Condylomata lata**
 - Resemble papillomas (warts)
- **Lues maligna**
 - Immunocompromised patients, fever, headache, myalgia, skin and oral ulcers



Tertiary Syphilis

- Latency 1-30 years
- 30% of patients
- Aortic aneurysms, CHF, CNS (tabes dorsalis, psychosis, dementia, paresis), DEATH
- Gumma
 - Granulomatous inflammation, nodular and ulcerated lesions, palate (oroantral communication) and tongue (interstitial glossitis)
- Luetic glossitis
 - Loss of dorsal lingual papillae

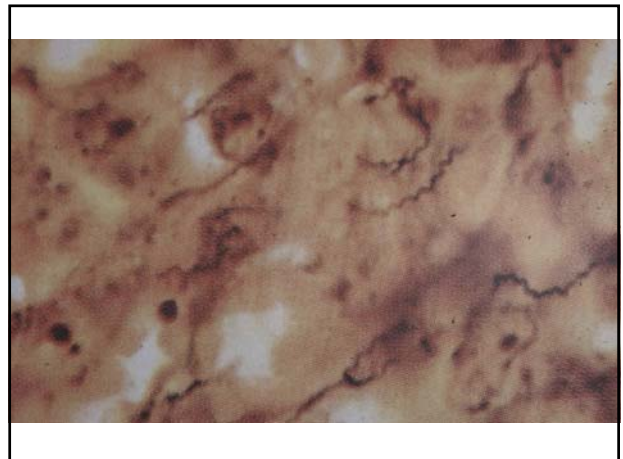
Tabes Dorsalis

- Degenerative neurologic disorder
- Dorsal columns of the spinal cord
- Weakness, locomotor ataxia, loss of coordination, somatosensory impairment, glossodynia
- Irreversible



Diagnostic Tests

- Dark field examination
- False positive mouth samples
- VDRL (Venereal Disease Research Laboratory)
- RPR (Rapid Plasma Reagin)
- FTA-ABS (Fluorescent Treponemal Antibody Absorption)
- TPHA (Treponema Pallidum Hemagglutination Assays)



Gonorrhea (Some Notes)

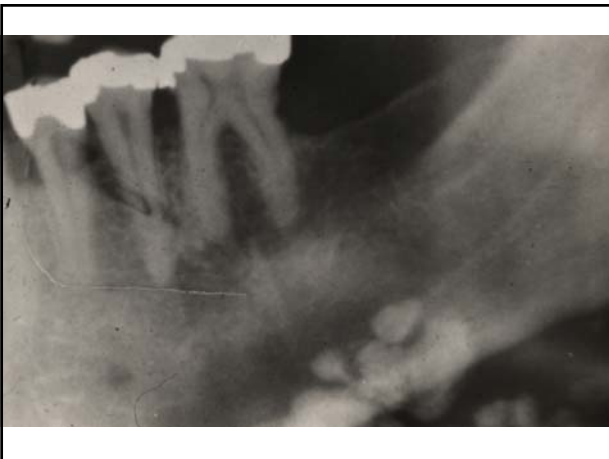
- Oral findings
- Pelvic inflammatory disease
- Gonococcal ophthalmia neonatorum
 - Cephalosporin and doxycycline
- Treatment is combined also for *Chlamydia trachomatis*

Tuberculosis

- *Mycobacterium tuberculosis*
- Recent resurgence
- Person to person contact
- Primary
 - Lungs, non-specific chronic inflammation with caseating granulomas (tubercles), dormant disease; 5-10% progress from infection to active disease (immunosuppression)
- Secondary
 - Reactivation
- Miliary tuberculosis
 - Disseminated disease

Secondary Tuberculosis

- Apex of lungs and spreading through lymphatics and vascular channels
- Low-grade fever, malaise, anorexia, weight loss, night sweats, productive cough
- Consumption



Nontuberculous Mycobacterial Infections

- *M. bovis*
 - Chronic cervical lymphadenitis (scrofula)
- *M. avium-intracellulare*
 - AIDS



Diagnostic Tests and Therapy

- Mantoux
 - (+) does not distinguish infection from active disease
 - (-) does not rule out tuberculosis
 - In AIDS 66% of the patients are false negative
- Culture
 - Requires 4-6 weeks
- PCR

Therapy

- Isoniazid & rifampin for 9 months
- Isoniazid, rifampin & pyrazinamide for 2 months followed by isoniazid & rifampin for 4 months
- Ethambutol and streptomycin

Leprosy

- *Mycobacterium leprae*
- Louisiana and Texas
- Nasal and oropharyngeal mucosa
- Tuberculoid (paucibacillary) and lepromatous (multibacillary) types
- Lepromatous
 - Leonine facies (facies leprosa)
 - Eyebrows, lashes and hair in general lost
 - Nosebleeds, loss of sense of smell
 - Collapse of the bridge of the nose
 - Papular lesions seen in hard and soft palate, labial maxillary gingiva, tongue, lips, buccal maxillary gingiva, labial mandibular gingiva and buccal mucosa





Noma (Cancrum Oris)

- *Fusobacterium necrophorum* or *nucleatum* and *Prevotella intermedia*; *Borrelia vincentii*, *staphylococcus aureus* and *streptococcus* species
- Poverty, malnutrition, poor oral hygiene, sanitation, illness, malignancy, immunodeficiency
- Infection can begin as NUG

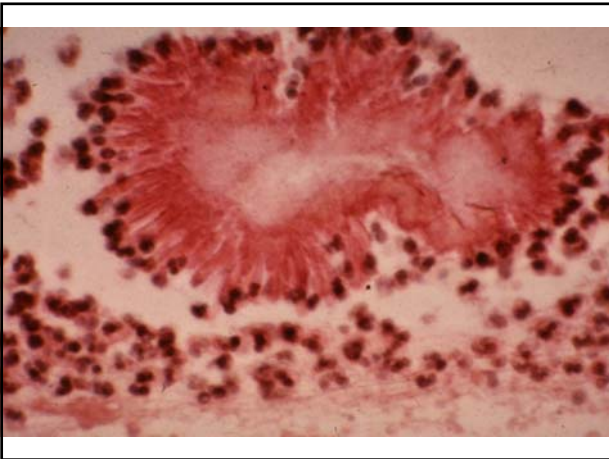


Noma Neonatorum

- Low birth weight infants who are malnourished
- *Pseudomonas aeruginosa* with *Escherichia coli*, *Klebsiella* or *Staphylococcus* species
- Lips, nose, and mouth

Actinomycosis

- Gram (+) anaerobic, *Actinomyces israelii*
- 50% in the cervicofacial region; tongue
- Anterior maxillary teeth & 1st mandibular molars
- Sulfur granules
- "Wooden" indurated area of fibrosis
- Draining fistula that is frequently painless
- Penicillin or tetracycline; therapy can last from 6 weeks to many months



Cat (not always)-scratch disease

- Starts from the skin → lymph nodes
- MOST COMMON CAUSE FOR REGIONAL LYMPHADENOPATHY IN CHILDREN
- *Bartonella henselae*
- Scratches in the face
- Unusual presentation sometimes
- Self-limiting; erythromycin (may not work)
- Oculoglandular syndrome of Perinaud
- Bacillary angiomatosis



Bartonella henselae infection from a dog

Abstract

Background: Bartonella henselae is a zoonotic pathogen that causes cat scratch disease (CSD) and trench fever. It is a gram-negative, obligate intracellular bacterium. The pathogen is transmitted to humans by cats and dogs. The clinical presentation of CSD is characterized by a self-limiting illness that typically begins with a papule or pustule at the site of the scratch, followed by a regional lymphadenopathy (swollen lymph nodes) and a fever. The incubation period is typically 4-10 weeks. The pathogen is transmitted to humans by cats and dogs. The clinical presentation of CSD is characterized by a self-limiting illness that typically begins with a papule or pustule at the site of the scratch, followed by a regional lymphadenopathy (swollen lymph nodes) and a fever. The incubation period is typically 4-10 weeks.

Case Report: A 32-year-old male patient presented with a 2-week history of a papule on his right hand, followed by a regional lymphadenopathy and a fever. The patient had been scratched by a dog. The patient was treated with doxycycline and recovered completely within 4 weeks.

Conclusion: Bartonella henselae infection can be transmitted to humans by dogs. The clinical presentation is similar to that of CSD. Early diagnosis and treatment with doxycycline can lead to a rapid resolution of symptoms.

Keywords: Bartonella henselae, dog, cat scratch disease, lymphadenopathy, fever.

References:

1. Archer G, Jones M, Davies M, et al. Bartonella henselae infection in a dog. J Clin Microbiol. 2003;41(12):4485-4486.
2. Archer G, Jones M, Davies M, et al. Bartonella henselae infection in a dog. J Clin Microbiol. 2003;41(12):4485-4486.
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