

SYPHILIS

*Chronic, sexually transmitted disease (STD) caused by **Treponema pallidum***

Sensitive to penicillin

- from 1940-70s decreased number of cases in U.S.
- 1980 increased number of cases
- further reduction
- Since 2001 small increase

Routes of transmission: skin, mucous membranes, placenta (congenital syphilis)

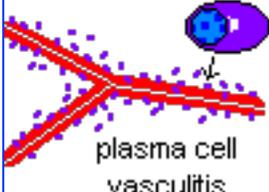
Transmission: sexual intercourse (men to men!)

Incubation: 2-6 weeks → bacteremia (via lymphatics)

The clinical history of the disease is divided into 3 stages

Syphilis

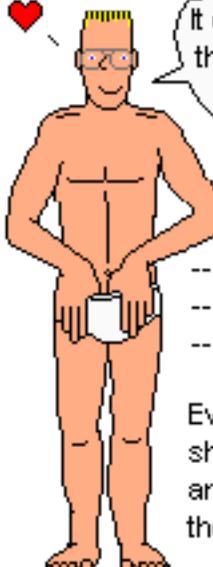
Easy to diagnose and treat -- if you think of it.
The consequences of a missed diagnosis are horrible.



plasma cell vasculitis

"When it comes to syphilis, suspect your grandmother."
-- Dr. Osler

Primary



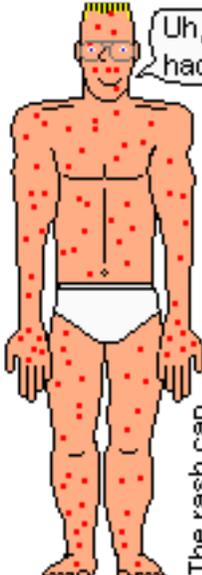
It doesn't hurt, so that makes it just a zipper cut!

Don't miss syphilis!

- hard
- painless
- sharp borders

Even people who should know better are likely to overlook the primary chancre!

Secondary



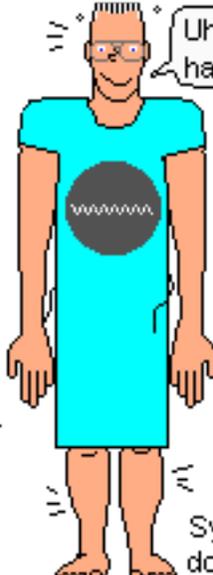
Uh, I never had a sore...

Don't miss syphilis!

The rash can look like almost anything. It goes away quickly.

General paresis simulates "manic-depressive illness."

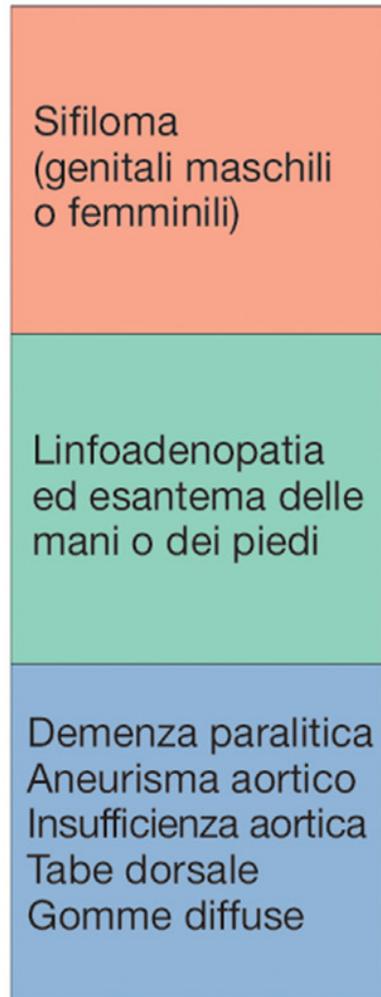
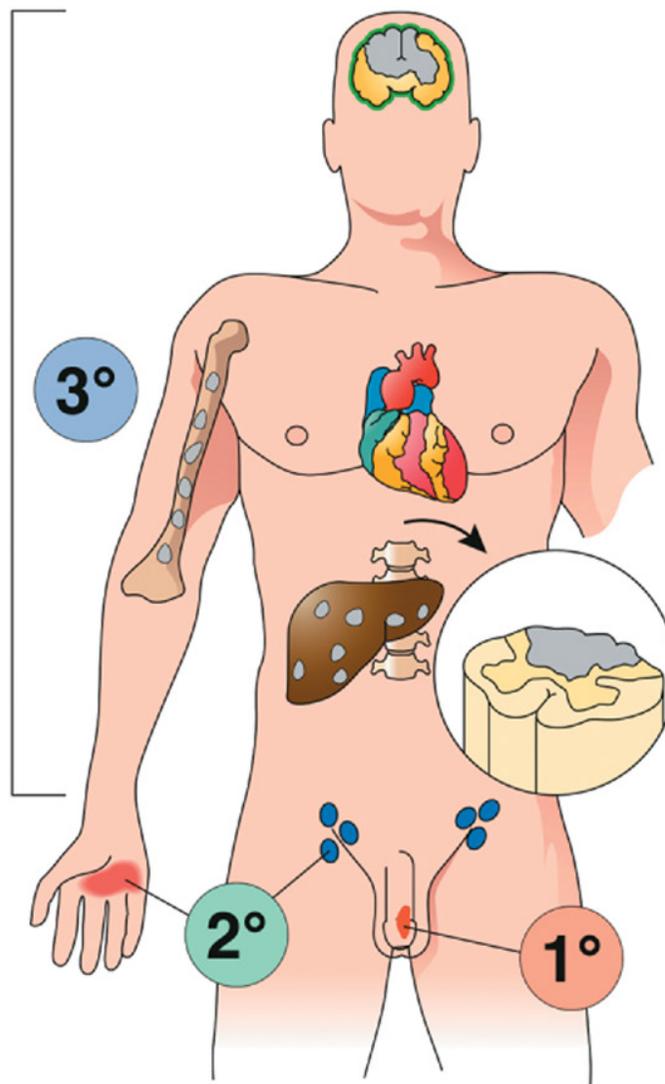
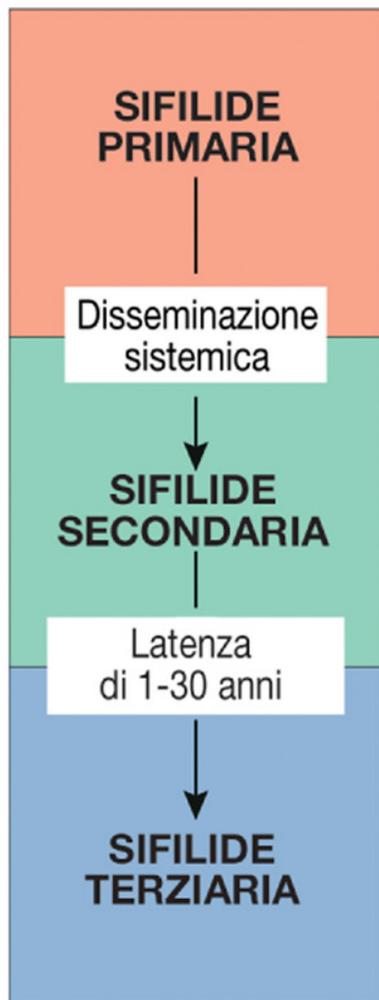
Tertiary



Uh, I never had VD...

The severe pain of tabes and/or meningovascular syphilis can be a puzzler.

Syphilis can do lots more.



PRIMARY SYPHILIS

Lesion: primary syphiloma (chancre)

Site: genital mucosa, oral mucosa

Hard papule, progressive increase in volume, ulceration

Lymph node enlargement in the area of the infection .

Exudate content rich in spirochete

Serological tests still show negative results (often)

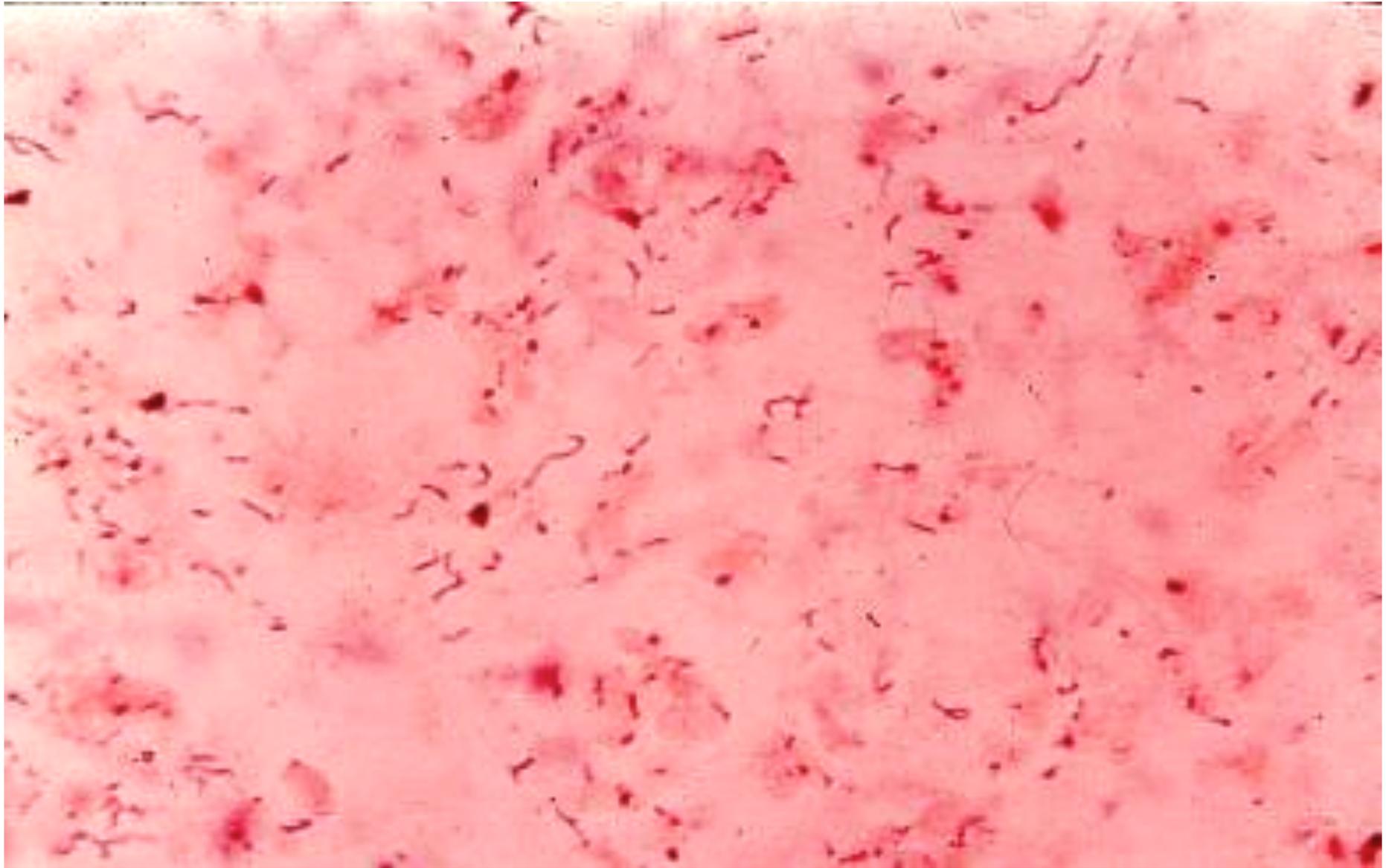
Spontaneous healing of lesion in 4-6 weeks

Histology: inflammatory infiltration of lymphocytes and plasma cells in the dermis with a rich vascular component

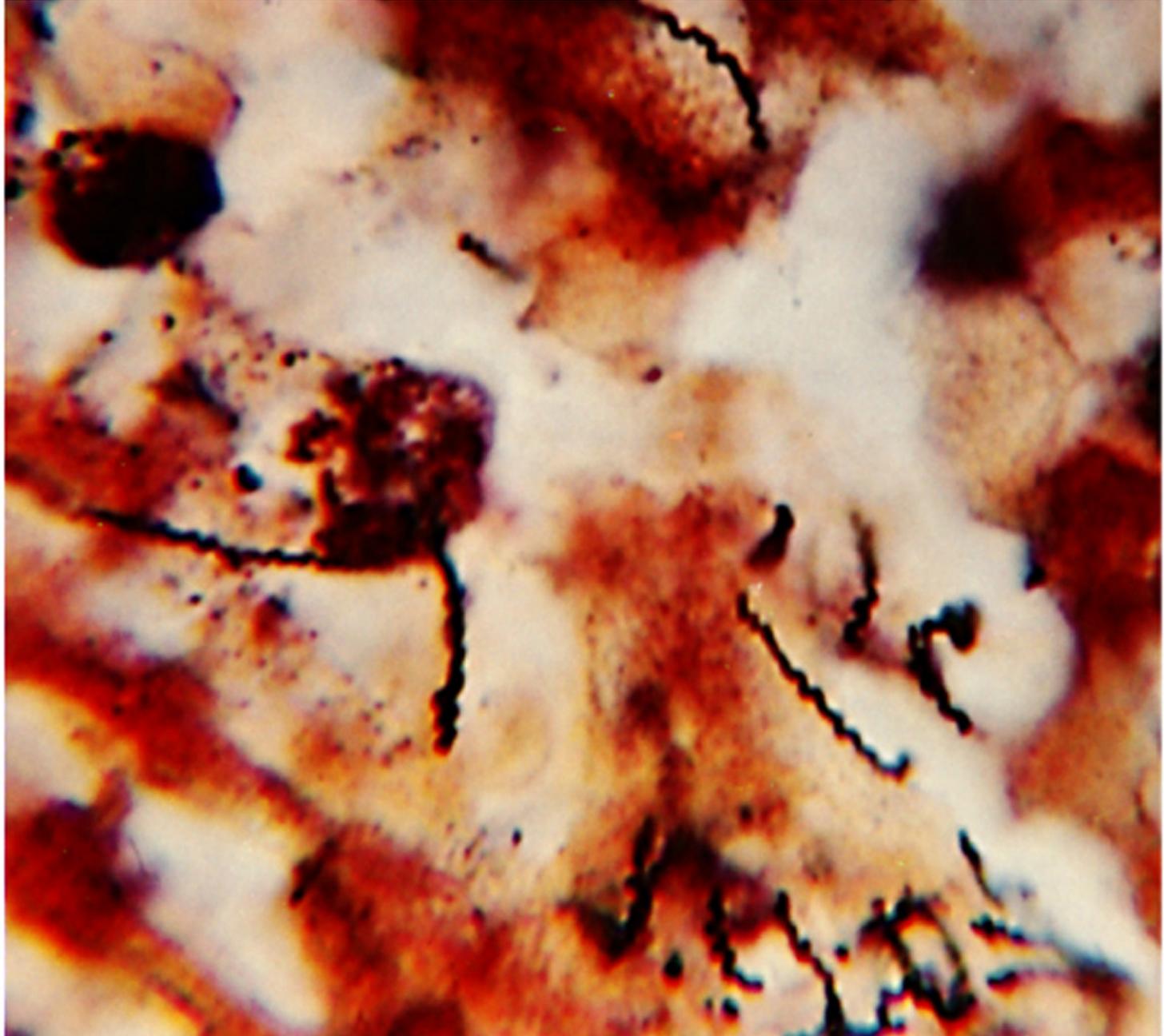
Serological tests still show negative results







Spirochetes:
Warthin-Starry



SECONDARY SYPHILIS

2-10 weeks after the primary lesion (chancre)

Diffusion and proliferation of the spirochete into the skin and the mucous membranes in 75% of patients not receiving treatment

Cutaneous lesions

maculopapular or pustular rash (palms and soles, perineal region, medial aspect of the thigh, axillary region (large plaque)

Mucosal lesions

oral cavity, pharynx, external genitalia (grey-silver erosions)
spirochetes are present in all lesions

Lymphadenopathy

Mild fever, malaise, weight loss

Positive serology

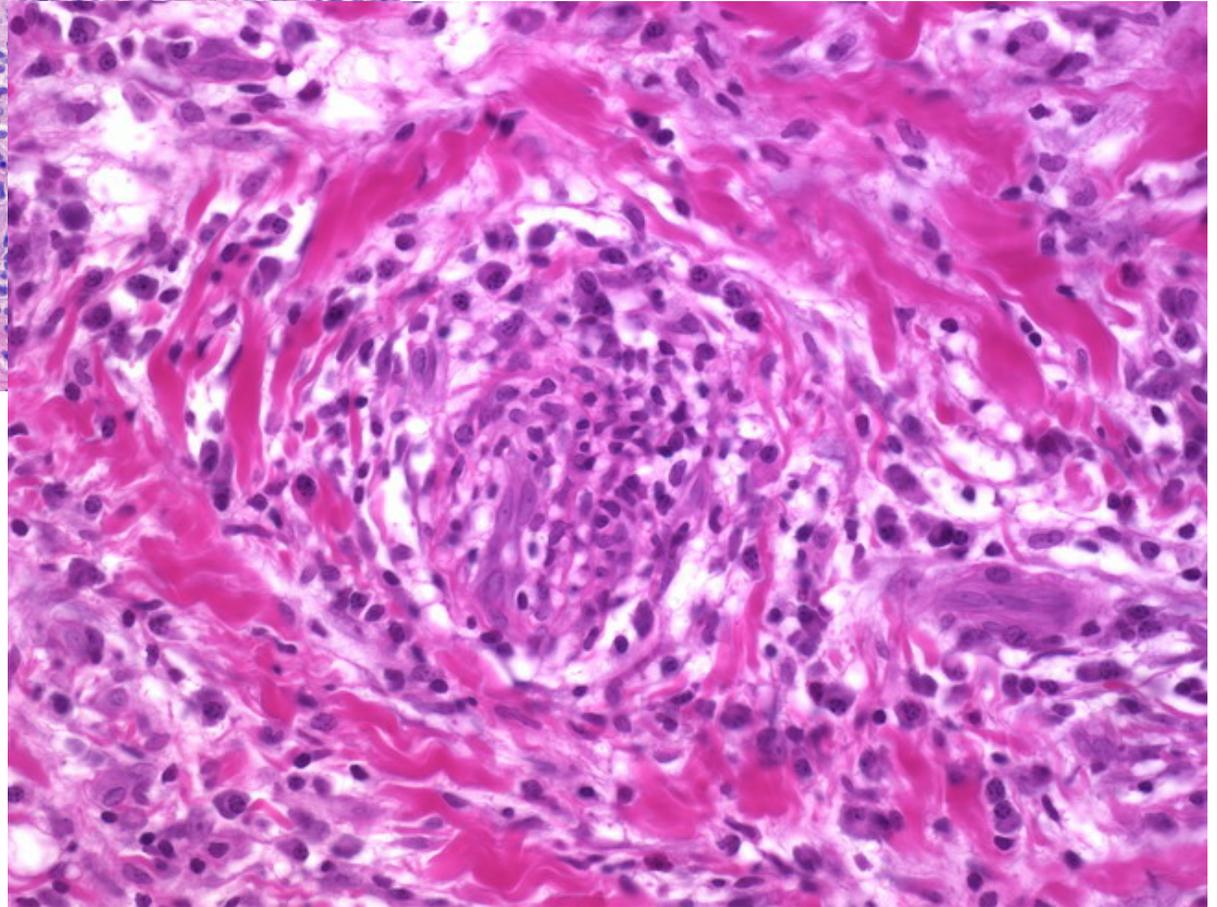
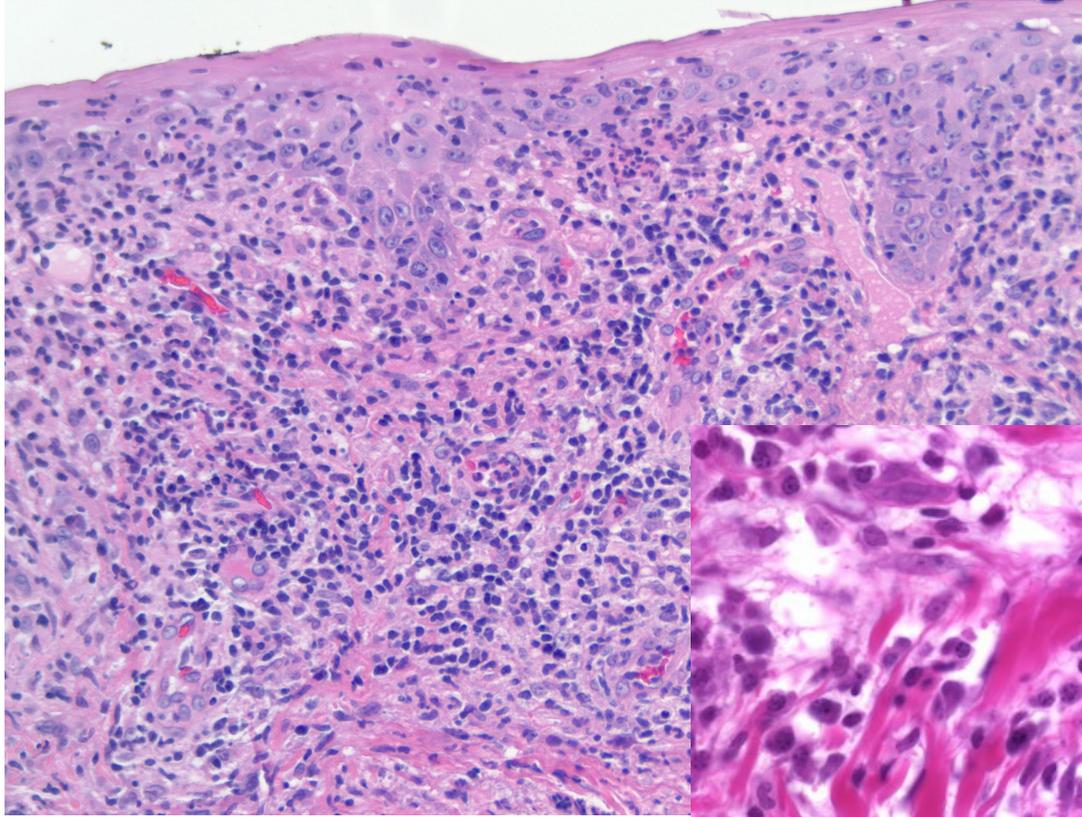
Spontaneous healing of the lesions in a few weeks



Latent stage (years)

Histopathology: proliferating endarteritis + chronic inflammatory infiltrate with lymphocytes and plasma cells





TERTIARY SYPHILIS

Nowadays rare (due to antibiotic therapy)

• Cardiovascular syphilis

Syphilitic aortitis (80%)

Endarteritis of vasa vasorum of the proximal aorta → scarring of the tunica media with loss of elasticity

- worsening dilation of the aortic root and arch
- aortic valve insufficiency and proximal aneurysm

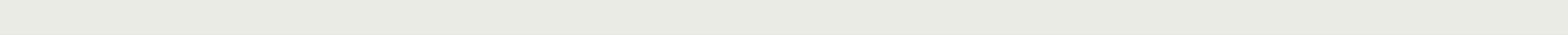
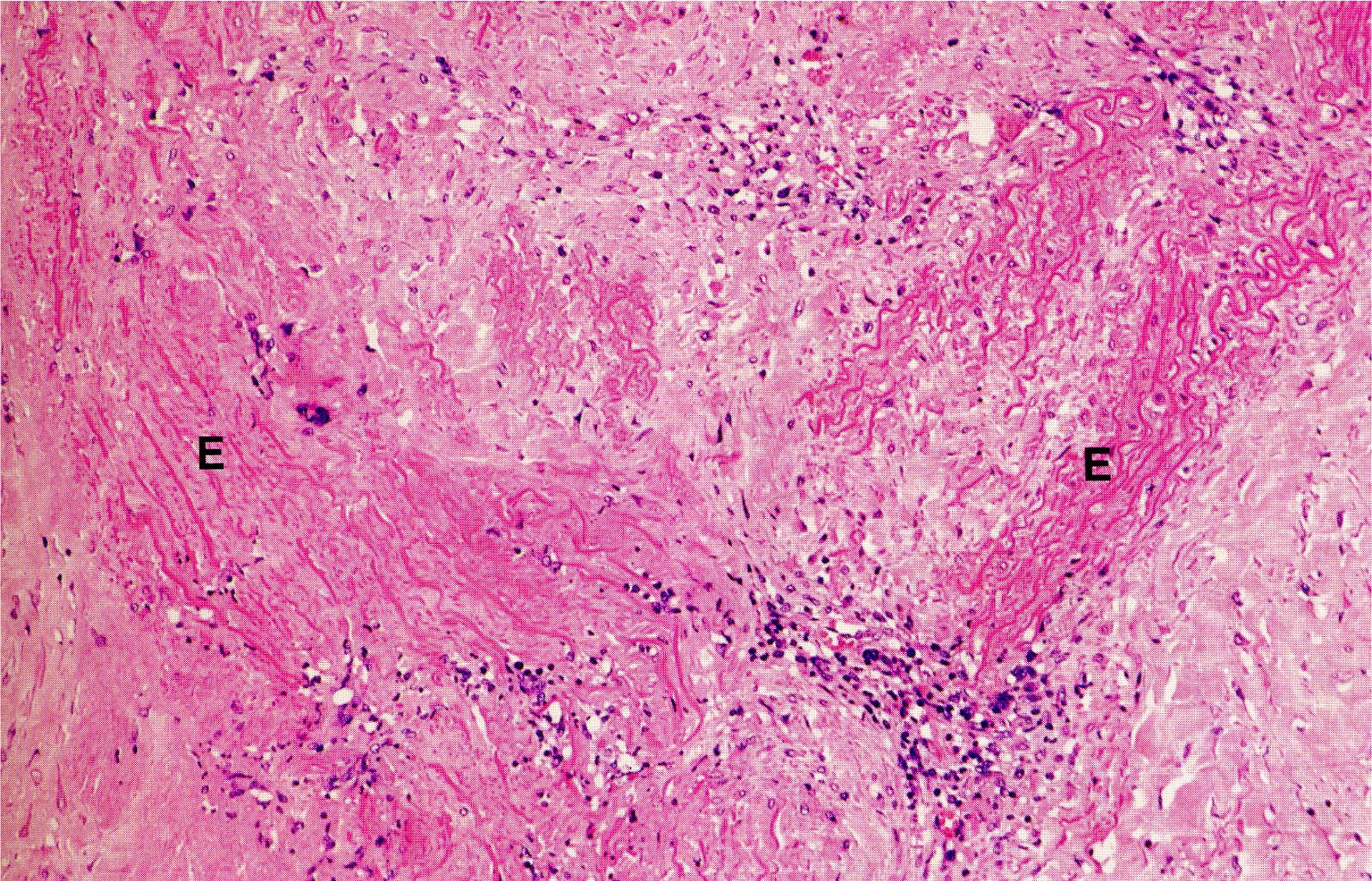
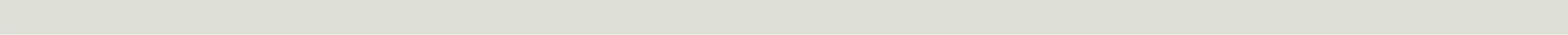
• Neurosyphilis

- symptomatic or asymptomatic
- meningovascular lesions, tabes dorsalis, general paresis

• Benign tertiary syphilis

- gummosis lesions can occur anywhere
- nodular lesions due to delayed hypersensitivity
- bones (pain, fractures), skin, mucosae, higher airways and mouth (ulcers)

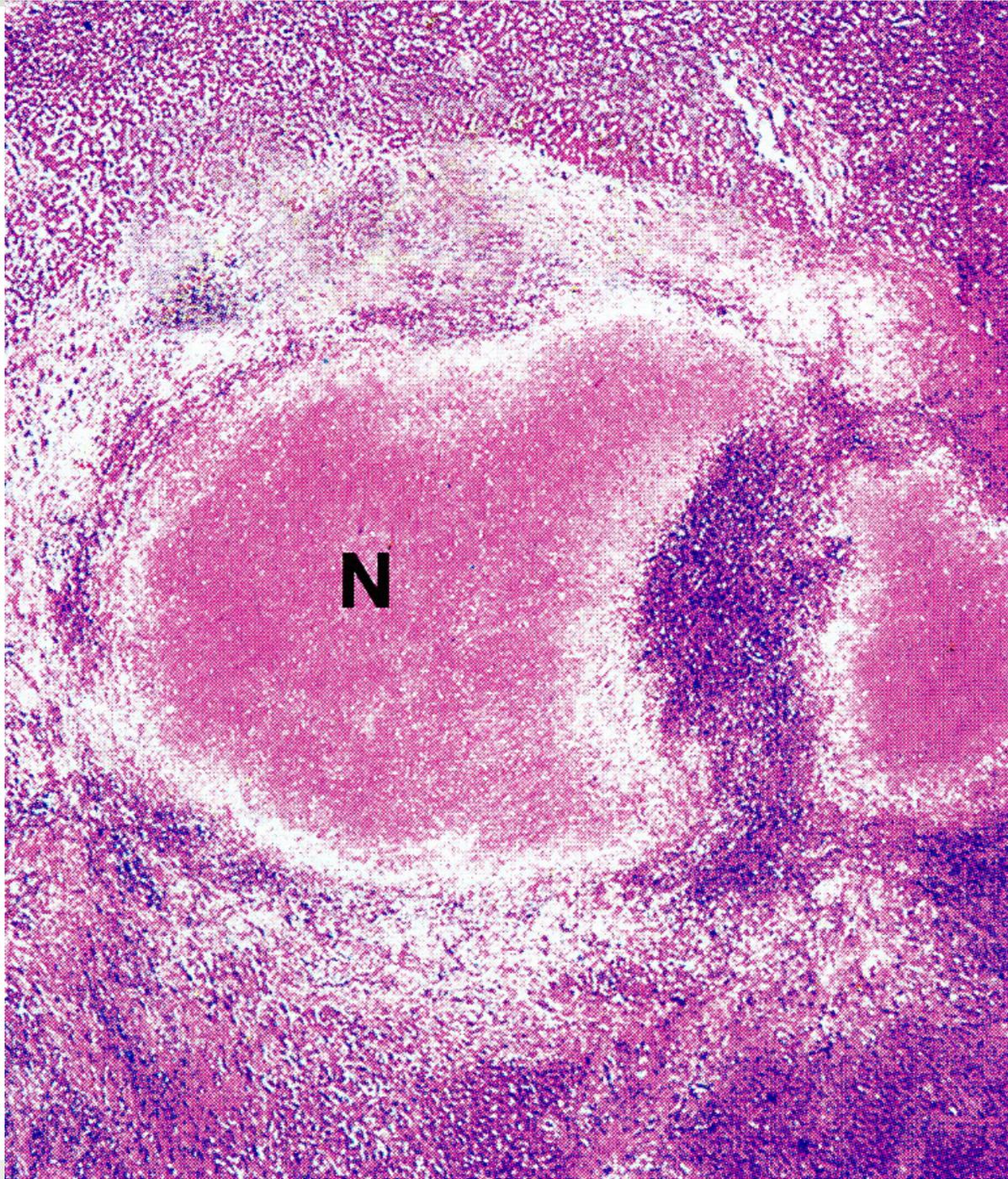




TERTIARY SYPHILIS

Morphology of the lesions

- **Gummas:** grey-whitish, single or multiple, variable dimensions, microscopic
- Histology:
 - central coagulative necrosis
 - palisading macrophages
 - fibroblasts
 - plasma cells
 - a few microorganisms





Collection of Nicholas Piumara, MD



Congenital syphilis

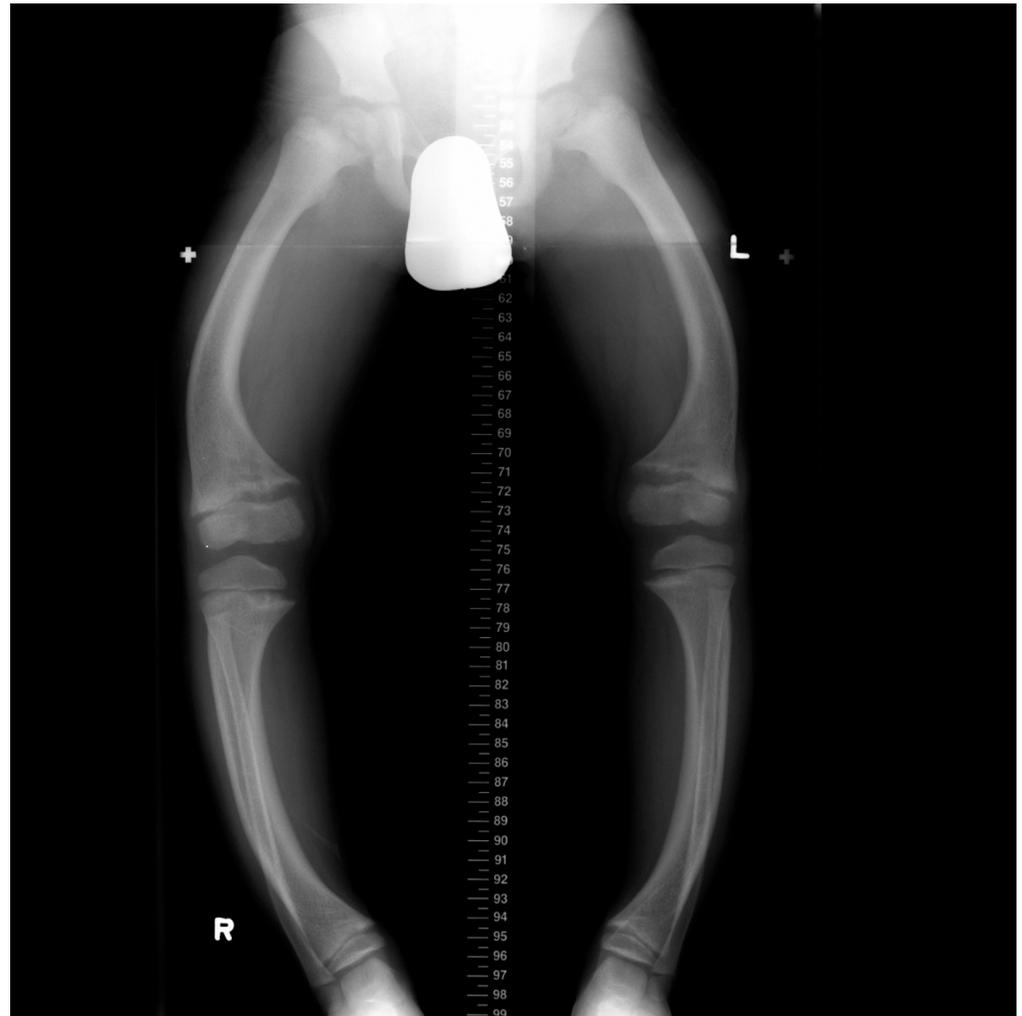
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graph LR; A[Congenital syphilis] --> B[early]; A --> C[late];
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Rare if the mother has been infected for more than 5 years

Trans-placental, from the infected mother to the fetus: primary and secondary syphilis (high bacterial load)

Early syphilis

- before 2 years of age
- nasal congestion and rhinorrhea
- desquamative-bullous skin lesions (hands, feet, skin, perioral and perianal region)
- hepatomegaly
- skeletal abnormalities: osteochondritis, periostitis, saber shin, saddle nose



Late congenital syphilis

- Late manifestations in children with untreated congenital syphilis

Hutchinson triad: blunted upper incisor teeth
 interstitial keratitis with loss of sight
 deafness from auditory nerve disease (VIII)

Skeletal, neurological and facial abnormalities





Hutchinson teeth