

Boards' Fodder:

Syphilology Manifestations & Treatment of *T. pallidum* Infection

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STAGE	MANIFESTATIONS		TREATMENT	
CONGENITAL (PRENATAL)	PLACENTA Langhan's cell layer [*] Placentitis: <ul style="list-style-type: none"> • acute chorioamnionitis • chronic villitis • hydrops placentalis • necrotizing funisitis 	FETUS Hydrops fetalis Intrauterine growth retardation Premature delivery Stillbirth	PRIMARY Aqueous crystalline PCN G 100,000 - 150,000 μ /Kg/day, administered as 50 000 μ /Kg/dose IV q12h x first 7 days of life, then q8h x 7-21 days	ALTERNATIVE Procaine PCN G 50,000 μ /Kg/dose qd IM x10 days
CONGENITAL (POSTNATAL)	EARLY Chorioretinitis ('Salt & pepper' fundus) Dactylitis Epiphysitis Hepatomegaly/Hepatitis Parrot's pseudoparalysis Pneumonia alba Snuffles Syphilitic pemphigus Rhagades Wimberger's sign	LATE Clutton's joints Frontal bossing Higoumenaki's sign Hutchinson's triad Interstitial keratitis 'Mulberry' molars Neurosyphilis Protruding mandible Saber shins Saddle nose Short maxillae		
PRIMARY	<i>Cutaneous: balanitis of Follman, chancre re` dux, 'dory flop' sign, primary chancre, syphilis d'emblee</i> <i>Other: Regional lymphadenopathy</i>		<i>Primary, secondary or early latent (<1 year):</i> Benzathine PCN G 2.4 mill U IM in a single dose	Doxycycline 100 mg bid PO x14 days <i>or</i> Tetracycline 500 mg qid PO x14 days <i>or</i> Ceftriaxone 1gr IM/IV daily x8-10 days
SECONDARY	<i>Cutaneous findings: Biette's collarette, condyloma lata, 'corona veneris', corymbiform, 'frambesiform syphilid', leukoderma colli (collar of Venus), lues maligna (ulceronodular, 'la grand verole'), moth-eaten' alopecia, mucous patches (plaques fauchées en prairie), Ollendorf's sign, 'raw ham' papules, ringed (annular) plaques, rupial plaques, split papule</i> <i>Other: Acute meningitis, acute nephrotic syndrome, gastrointestinal involvement, granulomatous iritis, pharyngitis, retrobulbar optic neuritis, syphilitic hepatitis</i>		<i>Late latent (>1 year) or syphilis of indeterminate duration, late benign:</i> Benzathine PCN G 2.4 mill U IM q wk x3	Doxycycline 100 mg bid PO x28 days <i>or</i> Tetracycline 500 mg qid PO x28 days
LATENT	Asymptomatic			
TERTIARY (LATE)	<i>Cutaneous: Gummas, pseudochancere redux</i> <i>Neurosyphilis: Asymptomatic, Gummas, Meningeal, Meningovascular, Parenchymatous (paresis, tabes dorsalis, Argyll-Robertson pupil)</i> <i>Rheum: bilateral bursitis of Verneuil, Charcot joints</i> <i>Vascular: Aortitis, aortic aneurysm, coronary ostial stenosis</i>		<i>Neurosyphilis, including ocular syphilis:</i> Aqueous crystalline PCN G , 3-4 mill U IV q4h x10-14 days	Procaine PCN G 2.4 mill U qd IM <i>plus</i> Probenecid 500 mg qid PO, both x10-14 days

GLOSSARY OF TERMS

Argyll Robertson pupil	Pupil accommodates, but does not react to light.
Balanitis of Follman	Chancres may be atypical [multiple, painful, purulent, and destructive].
Biette's collarette	Thin, white ring of scales on the surface of the papules.
Chancre re` dux	(Monorecdivic chancre) the reappearance of a chancre after partial healing as a result of insufficient treatment.
Charcot joints	Enlarged, painless, uninfamed joints, with or without deformity, in the lower extremities and spine.
Clutton's joints	Synovitis with effusions of the knees and elbows.
Corona veneris	Macules &/or papules along the hairline.
Corymbiform (bomb shell)	A large central papule surrounded by satellite raised pustules.
Condyloma lata	Skin-colored or hypopigmented, moist, oozing papules located perianally and on the genitalia. They become flattened and macerated. These are teeming with treponemes, and thus are extremely infectious.
Dory flop sign	When the foreskin is retracted, mucosal surface chancres flip briskly.
Frambesiform syphilid	Condylomata lata in intertriginous areas may proliferate forming nodular lesions that resemble raspberries.

GLOSSARY OF TERMS (CONTINUED)

Gummas	Rubbery tumors with predilection for skin or long bones, may also develop in the eyes, mucous membranes, throat, liver, or stomach lining.
Higoumenaki's sign	Unilateral, irregular enlargement of the clavicle at site of sternocleidomastoid attachment, secondary to periostitis.
Hutchinson's teeth	Centrally notched, widely spaced, peg-shaped upper incisors.
Hutchinson's triad	Hutchinson's teeth, CN 8 nerve deafness, and corneal opacities (2ndry to interstitial keratitis).
Langhan's cell layer [*]	Layer of the cytotrophoblast of the placenta: a controversial protective placental barrier until 20 wk gestation. Recently it has been demonstrated that treponemas cross the placenta in early pregnancy.
Leukoderma colli	(Syphilitic leukoderma / collar of pearls / collar of Venus / venereal collar), round or oval, ill-defined, depigmented macules with hyperpigmented borders occurring on the anteriolateral neck and chest.
Lues maligna	Areas of ulcerated and necrotic tissue, occurs in secondary syphilis (more likely in patients with HIV).
Mulberry molars	(Moon's or Fournier's molar) sixth-year molars, is seen in the first lower molar.
Mucous patch	Painless, shallow, rounded gray macerated erosions, located on the oral, genital and anal mucosa. These are teeming with treponemes.
Ollendorf's sign	Papules tender to palpation.
Parrot's pseudoparalysis	Reduced movement of the extremities due to pain.
Pneumonia alba	Yellowish-white, heavy firm, and grossly enlarged lungs (pneumonitis).
Pseudochancere redux	A solitary gumma of the penis.
Rhagades (Parrot's lines)	Perioral fissures.
Rupial lesion	Ulcerative lesions with a heaped-up crust, oyster-shell like.
Saber shins	Anterior tibial bowing.
Snuffles	Bloody or purulent mucinous nasal discharge.
Split papule	Lesions at the angle of the mouth or the corner of the nose which have a central linear erosion.
Syphilis d'emblee	Syphilis occurring without an initial sore.
Syphilitic pemphigus	Vesiculobullous eruption.
Wimberger's (cat-bite) sign	A radiographic "saw tooth" appearance at the medial aspect of the proximal tibial metaphysis.

REFERENCES:

- Berman SM. Maternal syphilis: pathophysiology and treatment. Bull World Health Organ. 2004 Jun;82(6):433-8. [*]
- Czelusta A, Yen-Moore A, Van der Straten M, Carrasco D, Tyring SK. An overview of sexually transmitted diseases. Part III. Sexually transmitted diseases in HIV-infected patients. J Am Acad Dermatol. 2000 Sep;43(3):409-32
- Gilbert DN, Moellering RC Jr, Eliopoulos GM, Sande MA, editors. The Sanford guide to antimicrobial therapy 2004. 34th ed. U.S.A: Antimicrobial Therapy Inc.; 2004.
- Singh AE, Romanowski B. Syphilis: review with emphasis on clinical, epidemiologic, and some biologic features. Clin Microbiol Rev. 1999 Apr;12(2):187-209.



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