THE NORTHERN HOSPITAL

SYPHILIS

"A Bar at the Folies Bergere" oil on canvas, Edouard Manet 1881-82, Courtauld Institute Galleries, London.

Before the Moulin Rouge, Paris had the Folies Bergere. It opened in 1869 near the Boulevard Montmartre and by the 1880s it had gained a notorious reputation as the most exhilarating music hall and night club in Paris, and by implication to most French, the world. It held two to three thousand patrons and was quite literally "the" place to be. It was considered the most modern, the most exiting, the most infamous place to be "seen", by the rich and famous of Paris. Along side its spectacular gas lit chandeliers were the very cutting edge in lighting technology, enormous spheres powered by the new electrical grids. Among the lights, daring female trapeze artists soared through the air above the

packed crowds, their "acts" spiced with highly charged erotic suggestion and sexual innuendo. Great glass mirrored bars, served the most fashionable drinks of the day, including, peppermint liqueurs, and American "pale ales", but above all of course, French champagne. A chance discovery of an 1878 wine list, showed no less than ten different brands of the very best champagne on offer, including, Mumm, Heidsieck and Pommery.

One of the great works of Western art captured the "joie de vivre" of the Folies Bergere of the 1880s. Edouard Manet was a frequent patron of the Folies, and though in 1881 his health was rapidly failing him, "A Bar at the Folies Bergere" is probably his greatest work, certainly it his best known. The young blonde woman who posed at one of the bars for Manet really did work at the bar. Her name was Suzon, but that is virtually all we know of her. She wears the uniform dress of a Nineteenth century Folies barmaid, the long black velvet low cut bodice over a grey skirt. A posy of flowers is placed in her bosom. Carnations, mandarins, liqueurs and champagnes of every description are stacked all around the marble counter. The massive gilt mirrors behind the barmaid, give us a glimpse of the press of the sophisticated Parisian elite. Chandeliers are seen side by side with the new "electrical spheres". When looking at Manet's great work we initially seem to feel or even expect to feel the glamour and electric glitz of the famous nightclub, yet somehow the longer we look at it, the more we experience an increasing disquiet or uneasiness. In fact Manet is portraying a world of "smoke and mirrors", all is not as it seems.

The barmaid, far from engaging the viewer, appears to have a distant far away, even melancholic look. On closer inspection we realize that the reflection in the massive mirror is actually an illusion. The marble counter clearly runs parallel to the mirror, yet the reflected image is presented as if the mirror runs off at an oblique angle to the mirror. We see the back of the barmaid off to one side. The strange gentleman who stares into her eyes intently is similarly off to one side. This could not be if the mirror was parallel to the bar. What Manet has done is depict the moment of "interaction" of the man and the barmaid, yet at the same time allowing the viewer to feel that it is in fact they who is interacting with the barmaid. In real life the stranger in the reflection would not be seen in the mirror as the barmaid herself would have blocked this reflection. In the background the crowd seems more interested in each other than in any provided "entertainment". The green feet of the trapeze artist, possibly the American Katarina Johns, who performed at the Folies in 1881, can be seen in the extreme top left hand corner, yet she does not hold the gaze of the audience, other interactions among the audience seem more important. In fact the greatest attraction of the Folies was actually its clientele. Monet's friend Mery Laurent sitting beneath the trapeze artist in a white dress, yellow gloves and black hat appears to be half-listening over her right shoulder in response to something whispered to her from an aristocratic looking gentleman behind her.

The Folies Bergere had an underlying secret. The barmaids, cashiers and other assorted sales girls were paid pittances for wages. Many were tempted to employ their "talents" more profitably. The male clientele were influential and rich, many extremely so. The Folies Bergere was in fact one of the major centers of "high-end" prostitution in Paris. This was known and tolerated by authorities, many of whom were probably regular

clients in any case. The "classier" ladies, wishing to avoid the seedy brothels of Paris tended to gravitate to the Folies. Indeed women unaccompanied by men were not allowed onto the premises unless issued with a "special card" by the managing director himself. Only the most beautiful, most elegant and above all the most discrete would be issued with these cards. In the setting of the Folies, away from the Parisian brothels, clients did not really consider themselves to be engaging a "real" prostitute. Indeed the Parisians had a special name for these women, the "demi-mondaine", ("fringe dwellers, not prostitutes, but not exactly "respectable" either). By and large they were in fact considered "respectable" by many. Wealthy clients, for the right price, could have a memorable "one night stand" that gave them the illusion of a unique and exciting "adventure". Of course not everything on offer was of the demi-mondaine variety. On the fringes of the halls were available the more common variety of "tart". The aristocratic gentleman in the top hat stares lustfully into the face of the barmaid, expressionless blotches for eyes. He has given his proposition and the eyes of the barmaid show us her answer. She is ambivalent about what is on offer. Whist she listens to the gentleman's suggestions, she does not do so with any visible emotional reaction.

Many demi-mondaine would in fact find wealthy and regular clients who "kept them" in a grand manner. The rich client in turn would have his "classy" mistress in a socially acceptable arrangement, within the upper echelons of Parisian society. These arrangements however could occasionally come at a high price indeed. Syphilis was the venereal scourge of the late Nineteenth and early Twentieth centuries. Its appearance would often derail very convenient arrangements. Not only was its cure protracted and difficult, its actual diagnosis was also. With its non-specific clinical manifestations and its ability to imitate a wide range of other diseases, it was like the Folies Bergere itself, a great impostor, an enormous illusion. The exciting "adventure" could quickly become a nightmare. Often the patient's doctor would be fooled by the illusion of a certain diagnosis, when in fact the underlying disease was syphilis, fooled in exactly the same manner as their medical colleagues of a century later would be so by HIV. The very name of the "Folies", thought by many to derive from the French word for folly or madness, seemed to issue a warning to potential clients of the risk of the development of the madness of tertiary syphilis. Others theories say the "Folies" derived from an Eighteenth century term denoting a country house hidden by leaves where it was possible to conduct secret "liaisons". Either way the name seemed more than appropriate.

To be fair to the physicians of the Nineteenth century the signs of tertiary neuro-syphilis could be quite obscure, the Argyll-Robertson pupil being a case in point. This subtle sign became known as the "prostitute's pupil". It is demonstrated by the inability of the pupil to react to light, whilst retaining its ability to accommodate for near objects. The prostitute's pupil in other words would "accommodate" but not "react"!

Just as the clue to the real situation when contemplating a confusing list of differential diagnoses, would sometimes rest in the eyes, the clue to the real situation in Manet's painting similarly seems to rest in the eyes. Unlike the true prostitute's pupil, however, in Manet's barmaid we seem to be observing the very opposite. The barmaid certainly "reacts" to her potential client, but she does not seem to be willing to "accommodate" him. One's guess is that this particular client in 1881 went away somewhat disappointed.

SYPHILIS

Introduction

Syphilis is an uncommon disease in Australia.

It may be seen however in immigrants from endemic regions or in the immunocompromised, such as those with HIV/ AIDS.

The various stages of syphilis have a wide range of clinical manifestations, particularly in the tertiary stage, and may therefore mimic a wide variety of conditions. It is for this reason the disease has been termed the "great imposter", (or (imitator). A degree of suspicion must always therefore be maintained, particularly in those at high risk, if the diagnosis is not to be missed.

Epidemiology

- The number of notifications of infectious syphilis in Victoria is currently relatively small, however it does occur in other parts of Australia.
- Imported infectious cases and HIV positive patients could result in syphilis re-emerging as a significant public health issue.
- Syphilis is still a significant problem worldwide.

Pathology

Organism

- Treponema pallidum, a bacterial spirochaete.

Pathophysiology

The prominent histologic features of the human response to *T pallidum* are vascular lesions with associated **endarteritis and periarteritis.**

Additionally, chronic infection can result in granulomatous lesions called **gummas.**

Reservoir

- Humans

Mode of transmission

Treponema pallidum can survive only briefly outside of the body; thus transmission almost always requires direct contact with an infectious lesion.

Modes of transmission include:

1. Sexual contact:

    - This is the predominant mode of transmission.

2. Transplacental infection:

    - Foetal infection occurs with high frequency in untreated early infections of pregnant women and with lower frequency later in the disease or in the late part of the latency period.

3. Transfusion of blood from infected individuals.

    - The risk of this is minimised however by the screening of all donated blood in Australia.

Syphilis may also enhance the transmission of HIV, (as for other diseases that cause genital ulceration).

Incubation period

- Ten days to three months.
- Most commonly it is around three weeks.

Period of Communicability

- A case is considered sexually infectious until the end of the early latent period, which is approximately two years after infection.
- Infectious moist mucocutaneous lesions are present in the primary and secondary stages of syphilis and may reoccur intermittently in the early latent period. These lesions may not be apparent to the infected individual.

Susceptibility and Resistance

- Everyone is susceptible to infection.
- Immune responses are only partially protective and reinfection may occur following treatment.

Clinical features

The clinical manifestations of syphilis are classically divided into 3 stages, **(primary, secondary and tertiary).** There may be a prolonged latent or asymptomatic period between the second stage and the onset of tertiary syphilis.

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Primary Stage:

This is characterised by the Syphilitic ulcer (or "chancre"), which appears following the incubation period.

The following characteristics are seen:

- It is usually firm, round, small and **painless.**
- It can be single or multiple.
- It may be associated with regional lymphadenopathy.
- It may take 3-6 weeks to heal.

The chancre is commonly on the genitals, however the lesion can be relatively hidden within the vagina, rectum, or mouth.

Without treatment the disease will then progress to the second stage.

Secondary Stage:

The second stage is characterized by:

1. Skin rash:
    - Rashes associated with secondary syphilis can appear as the chancre is healing or several weeks after the chancre has healed.
    - The rash is non-specific can cannot be used to definitively diagnose syphilis.
    - It is usually erythematous macules/ papules.
    - It may appear on the palms of the hands and soles of the feet.
    - It may be very fine and not noticed.
2. Constitutional symptoms:

    There may be some associated non-specific constitutional symptoms, such as

    - Fever

- Anorexia
- Headache
- Myalgias
- Arthralgias
- Lethargy/ malaise.

3. There may a generalized mild lymphadenopathy.

4. Mucous membrane lesions:

    - These appear as superficial mucosal erosions, usually painless, that may develop on the tongue, oral mucosa, lips, vulva, vagina, and penis.

The signs and symptoms of secondary syphilis will resolve with or without treatment, but without treatment, the infection will progress to the latent and possibly tertiary stages of the disease.

Latent Period:

Following resolution of the symptoms of the secondary stage, a latent (or asymptomatic) period may follow.

Without treatment, the infected person will continue to have syphilis (and hence be infectious) even though there are no signs or symptoms.

The latent period is variable, but be as long as 10-20 years.

Late latent syphilis is a term used where latent syphilis has existed for two or more years or of indeterminate duration, in the absence of neurosyphilis and other symptoms and signs of disease. [1]

Tertiary Stage:

About 15% of infected people, who have not been treated for syphilis, may develop tertiary syphilis.

This is a widespread, multi-system chronic and progressive infection that may ultimately be fatal.

Manifestations of tertiary syphilis include:

1. Neurological:

    ### Parenchymatous neurosyphilis:

This is primary nervous tissue involvement:

- Dementia
- Spinal cord lesions:

  Including **tabes doralis**, a specific neurological syndrome resulting from destruction of the dorsal columns, dorsal roots, and dorsal root ganglia of the spinal cord.

Meningovascular syphilis:

This is primarily meningeal and microvascular involvement:

- Cranial nerve lesions
- Subacute meningitis.

2. Cardiovascular:

   Lesions are usually due to the vasculitis.

   - Aortic aneurysms, (secondary to syphilitic aortitis).
   - Other larger arteries may be affected with aneurysms.
   - Aortic valve incompetence.

3. Ocular:

   Argyll-Robertson pupil:

   Here the pupil:

   - Is small
   - Is irregular
   - **Does not** react to light.
   - **Does** still constrict with accommodation.

4. Gummata:

   These are chronic granulomatous lesions, which may infiltrate and destroy tissues, including in particular:

- Skin/ mucosal surfaces
- Bone
- Liver
- Brain

Syphilis in pregnancy:

Foetal infection may result in:

- Abortion.
- Stillbirth.
- Premature delivery.
- Perinatal death.
- Live born infants may have **congenital syphilis**, with widespread abnormalities.

Investigations

Bloods:

1. FBE
2. HIV
    - Patients should be tested for HIV, the syphilitic ulcer, (chancre), enhances the transmission if HIV.
    - Other sexually transmissible infections may also be present in addition to syphilis, (including hepatitis B and hepatitis C)

Microscopy: [1]

Syphilis can be diagnosed by the demonstration of spirochaetes in the exudate from primary chancres or from the mucous membrane lesions of secondary syphilis, using dark field microscopy or immunofluorescence.

Dark field microscopy is a difficult technique and requires an experienced operator for reliable results. The test is unreliable on mucous membrane lesions due to the presence of morphologically similar saprophytic spirochaetes. Dark field is also best done on site, as drying of the exudate during transport to the laboratory renders the specimen unsuitable for microscopy.

Immunofluorescence is more sensitive and does not have to be performed immediately. It is suitable for use with mucous membrane lesions but it is not currently performed by the Victorian Infectious Diseases Reference Laboratory.

Serology: [1]

More commonly syphilis is diagnosed using a combination of specific treponemal and non-treponemal serological tests:

Non-treponemal tests:

Non-treponemal tests include:

- Rapid plasma reagin **(RPR)**
- Venereal diseases research laboratory **(VDRL)**

These tests measure antibodies that are produced in response to syphilis and also to a relatively large number of other conditions as they are non-specific.

This may result in biological false positives.

The non-treponemal tests are primarily done to provide an indication of current disease activity.

Treponemal tests:

Specific treponemal tests measure specific treponemal antibodies in serum.

These include:

- Treponema pallidum particle agglutination.
- Enzyme immunoassay.
- Fluorescent Treponemal antibody absorption tests.

Once these tests are reactive they usually remain so for life and give no indication of current disease activity.

Enzyme immunoassays with highly purified Treponema pallidum antigens are becoming more commonly used for screening for syphilis. These assays have a high specificity and sensitivity.

IgM enzyme immunoassay for the detection of IgM antibodies to Treponema pallidum is a useful assay for the diagnosis of congenital syphilis.

All sera showing reactive serology on screening tests should be forwarded to a reference laboratory for confirmatory testing.

It is necessary to interpret syphilis serology in the context of:

- Clinical history and examination
- Serial RPR titers tested in parallel where possible (results obtained from different laboratories are not directly comparable)
- Treponema test results
- A past record of treatment.

It is essential that all cases of syphilis receive close clinical and laboratory follow-up.

PCR testing:

PCR testing from lesion samples is available from the Victorian Infectious Diseases reference laboratory.

Lumbar puncture: [1]

Lumbar puncture is advised when there are:

- Neurological or ophthalmic signs or symptoms
- Evidence of active tertiary syphilis
- Treatment failure
- HIV infection with late latent syphilis or syphilis of unknown duration.

Management

Antibiotics: [2]

1. Early syphilis:

    - Benzathine penicillin G 1.8gm IM single dose with 0.5% Lignocaine

    Or

    - Procaine penicillin G 1gm IM daily for 10 days.

    Or

- Doxycycline 100mg twice daily for 14 days (if allergic to penicillin and not pregnant).

2. Late latent syphilis in HIV negative patients:

- Benzathine penicillin G 1.8 g (2.4 million units) IM with 0.5% Lignocaine, per week for 3 weeks

Or

- Procaine penicillin G 1 g IM daily for 15 days.

3. Cardiovascular syphilis:

- Benzyl penicillin 1.8 g IV, 4-hourly for 15 days. [3]

Or

- Procaine penicillin G 1gm IM daily for 20 days.

4. Neurosyphilis:

- Benzyl penicillin 1.8 g IV, 4-hourly for 15 days. [3]

Or

- Benzyl penicillin 2-4gm IV 4 hourly for 10 days, or if outpatient treatment is unavoidable.

Or

- Procaine penicillin 1gm IM daily plus probenecid 500mg bd for 20 days

Non-penicillin treatment regimens:

- Non-penicillin regimens have not been thoroughly evaluated and should be used only when penicillin is absolutely contraindicated.

- Erythromycin is not highly effective and may not prevent congenital syphilis if it is used during pregnancy.

- Penicillin-allergic pregnant women with syphilis pose difficult problems, and should be managed in consultation with an experienced Sexual Health Physician.

Steroids:

- In cardiovascular syphilis or neurosyphilis, concomitant treatment with prednisolone or prednisone 20 mg orally 12-hourly for 3 doses may be

administered initially with penicillin, to reduce the likelihood of a Jarisch-Herxheimer reaction. [3]

Syphilis and HIV infection:

- Patients with syphilis should be tested for HIV infection.
- The possibility of neurosyphilis should always be considered in the differential diagnosis of neurological disease in HIV infection.
- Treatment failures are more common when syphilis occurs in HIV-infected patients and this should be remembered when selecting a treatment regimen and in supervising follow-up.

Congenital syphilis:

- All newborns of mothers with syphilis should be investigated and treated in consultation with a specialist. For the treatment of congenital syphilis, latest **Therapeutic Guidelines**.

Follow-up [2]

- It is essential that all patients treated for syphilis receive close clinical and laboratory follow-up.
- Quantitative RPR or VDRL tests should be performed at 3, 6 and 12 months after treatment.
- Follow-up serology may sometimes be extended to 24 months at the discretion of the practitioner.
- Follow-up serology is especially important for those patients treated with antibiotics other than penicillin.
- Re-treatment should be considered if clinical signs or symptoms persist or recur, if there is a sustained fourfold increase in the RPR titre, or if the initial RPR or VDRL titre fails to show a fourfold decrease within 6 months after treatment of early syphilis.

Contacts:

- Contacts should be tested and treated, as for any venereal disease.

Notification

- Syphilis (Group C disease) must be notified **online** or in writing within five days of diagnosis.

- Note that Medical practitioners have a statutory obligation under the Children and Young Person's Act 1989 to notify the Department of Human Services' Child Protection service if they believe that a child is in need of protection on the basis of sexual abuse.

"Reine de Joie", Print poster, Henri Toulouse-Lautrec, 1892, Museum Toulouse-Lautrec. Monsieur Toulouse-Lautrec depicts a gentleman enjoying somewhat more success with his Demimonde

References

1. Syphilis, The Bluebook Website January 2008.

2. Syphilis in HIV negative patients: October 2007. Venereology Society of Victoria, National management guidelines for sexually transmissible infections. From www.mshc.org.au

3. Therapeutic Antibiotic Guidelines, 13th ed 2006.

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