Syphilis — The great masquerader is back with a vengeance

Dr Jenny Robson, Head of the Microbiology Department, Sullivan Nicolaides Pathology

Syphilis, caused by the spirochaete Treponema pallidum, is an old disease. Many notable figures throughout history are thought to have suffered from this scourge. It remains exquisitely sensitive to penicillin so, in theory, should be easily treatable.

Over the past two years, the number of notified cases of infectious syphilis – syphilis of less than two years’ duration (Figure 1) — has continued to grow.

In the Northern Territory and Queensland, the emerging risk groups are young Aboriginal and Torres Strait Islanders (ATSI), particularly people from the north of the State. In this group, in which young females are infected, there is now a real risk of new cases of congenital syphilis (Figures 2 and 3). In other geographical areas, gay and bisexual males form the major risk group.

Co-infections with other sexually transmitted infections (STIs) are common and should always be tested for simultaneously. Similarly, all STI screens should include a test for syphilis. At-risk patients require screening for co-existing chlamydia, gonorrhoea and/or trichomonas if the patient belongs to the ATSI group. Screening for HIV, hepatitis A, B and C should also occur, with hepatitis A and B vaccination in those who are non-immune. The recommended regular screening for asymptomatic gay and bisexual males is outlined in the now renamed STIGMA guidelines (http://stipu.nsw.gov.au/wp-content/uploads/STIGMA_Testing_Guidelines_Final_v5.pdf).

Presentation

Early or infectious syphilis (less than two years’ duration) includes primary, secondary and early latent syphilis (Algorithms 1 and 2).

- Primary syphilis usually manifests as a chancre (an anogenital or, less commonly, extragenital painless, but also sometimes painful, ulcer with indurated edges).
- Progression to secondary syphilis occurs over the following months and presents as an acute systemic illness with rash, which is usually truncal, but also involving palms and soles (Figure 4), condylomata lata (clusters of soft, moist lumps in skin folds of the anogenital area), mucosal lesions, alopecia, lymphadenopathy, hepatitis, or meningitis.
- Early latent syphilis is infection of less than two years’ duration where the patient is asymptomatic.

Late latent syphilis is defined as latent (asymptomatic) syphilis of longer than two years’ duration, or of unknown duration. Tertiary syphilis refers to syphilis of longer than two years’ duration, or of unknown duration, with cardiovascular, central nervous system or skin and bone (gummatous syphilis) involvement.

Syphilis — The great masquerader is back with a vengeance (cont.)

NEW TEST ANNOUNCEMENT

TNF drug (Infliximab and adalimumab) serum levels

TNF drug levels are useful in determining the therapeutic strategy in IBD and in rheumatoid arthritis. When combined with anti-drug antibodies, the levels help decide between increasing the dose or frequency, changing the TNF drug, or changing to a different class of drugs.

Testing is indicated if therapeutic failure is being investigated, or if down, titration of medication is being considered.

For high-risk patients with genital ulcers, it is advisable to test and treat for syphilis on the day of presentation without waiting for a positive test result. Sexual partners of people who have infectious syphilis should also be tested and treated simultaneously without waiting for the results of tests.

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Historical figures with syphilis

Desiderius Erasmus
Paul Gaugin
Al Capone
Ferdinand Magellan
Florence Nightingale
Giovanni Casanova
Gustave Flaubert
John Keats
King Henry VIII of England
Ludwig van Beethoven
Napoleon Bonaparte
Vincent van Gogh
24-hour turnaround with new PCR test for BCR-ABL

Sullivan Nicolaides Pathology is pleased to advise that our Molecular Pathology Department is now NATA accredited for testing for BCR-ABL by PCR using the Cepheid Xpert BCR-ABL test cartridge platform.

Results will be available to our referring clinicians in one working day after receipt of the specimen in the lab. Previously, there was an average of almost seven working days between collection and reporting of results.

The new test detects transcripts at the p210 breakpoint that represent >95% of BCR-ABL rearrangements in adults patients.

The Xpert BCR-ABL CML p210 assay is also capable of detecting to the level of MR4.5 (≤0.0032% IS); however, accurate quantification at these low transcript levels is not possible. Quantification is accurate to the level of MR5 (0.01% IS) with this system.

The next generation of the Xpert cartridge for BCR-ABL, the ‘Ultra’, will be implemented from December 2015. This system is capable of accurate quantification to the low transcript level of MR4.5 and 71.4% sensitivity at the level of MR5 (manufacturer data).

Specimen
It is important to note that EDTA peripheral blood is the specimen of choice for molecular detection and monitoring for BCR-ABL.

Bone marrow samples are no longer suitable for BCR-ABL testing using this system.

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Changed collection protocol for plasma free metanephrines

Dr David Kanowski, Biochemistry Department, Sullivan Nicolaides Pathology

Optimal biochemical testing for PPGLs (phaeochromocytomas and paragangliomas) involves the measurement of plasma free metanephrines.

To further improve the diagnostic accuracy of this test, it is now recognised that blood should be collected from patients who have been resting in the supine position for 30 minutes beforehand (Clinical Practice Guideline, JCEM 99: 1915-1942, 2014).

Normally, plasma catecholamines and their metabolites (metanephrines) rise with upright posture due to strong sympathetic activation. Patients with PPGLs do not show this response. Therefore, if higher reference intervals are chosen to suit an upright posture, there is a significant decrease in diagnostic sensitivity for PPGLs.

In addition, the accuracy of the test has been improved by the incorporation of age-related reference intervals for normetanephrine.

This is because levels rise significantly with increasing age. Age-related intervals result in significantly improved sensitivity for PPGLs in younger patients and improved specificity in older patients, compared with a fixed reference interval.

Fasting is important for the 3-methoxytyramine reference interval (the metabolite of dopamine), since many foods, particularly certain fruits and nuts, contain biogenic amines. Dietary influences are minimal for normetanephrine and metanephrine.

Sullivan Nicolaides Pathology has recently implemented this new collection procedure. Patients need to phone their local collection centre to check whether collection for plasma free metanephrines is available.

The facilities for patients to lie down for 30 minutes are not available in every collection room.

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Recent change to therapeutic range for APTT for unfractionated heparin

Our therapeutic range for APTT for unfractionated intravenous heparin has been changed from 60–80 seconds to 65–90 seconds.

This change is in response to the latest batch of test reagent. Every batch of APTT reagent supplied to SNP undergoes rigorous pre-release testing by the manufacturer. A number of factors are assessed to ensure batch-to-batch stability of the reagent, and hence, test results.

Assessments are conducted for heparin sensitivity, factor sensitivity (particularly to reduced levels of factor VIII), sensitivity to the presence of lupus anticoagulants, and to determine the normal range. A shift in APTT sensitivity to heparin, detected during the most recent reagent assessment process, was confirmed by the manufacturer.

To ensure effective and safe management of patients receiving UFH anticoagulation, all hospitals using our services have been notified of the new UFH therapeutic range to enable them to update heparin dosing protocols to reflect the change in therapeutic range. Comments are also being included in all APTT results reports.

Clinicians should note that APTT results are specific to the reagent and to the instrument used to generate the result. Also APTT results are NOT interchangeable between different pathology providers.

For further information please contact:
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Assisting you with categorising your patients for Diabetes PIP – Webster Custom View

With the introduction of the diagnostic item number for HbA1c, correct classification of patients either as diabetic monitoring or diagnostic testing is an important step in your Diabetes PIP system.

We are pleased to advise that our online results application, Webster, can now provide you with a new, easy-to-use report—the HbA1c Screen/Monitor Report—which gives you real-time information about how your patients have been classified.

Webster is available with a personal account for medical practitioners, or a clinic account for your diabetes care plan manager. Application forms are available at www.snp.com.au.

Your Medical Liaison Manager is available to assist you and your diabetes care plan manager with your applications if you are not already using Webster, and can provide an update on using the diabetes e-health reports in Webster.

Telephone 1300 SNPATH (1300 767 284)

Screen shot of report list

Screen shot of patient list

Changes to services for Christmas and the New Year

Please visit our website www.snp.com.au for information regarding Collection Centre closures.

**Warfarin Care**

To ensure the safe and complete enrolment of patients into our Warfarin Care program, enrolments will be closed on the following dates:

- Community patients: closing 5 pm Friday 11 December 2015 and re-opening 8 am Monday 4 January 2016
- Hospital patients: closing 5 pm Tuesday 15 December 2015 and re-opening 8 am Monday 4 January 2016

**Cardiology services: ECG, Holter and ABP**

To ensure all patient results are reported prior to Christmas, please be advised that the final date for appointments will be:

- 48-hour Holter monitoring: Wednesday 9 December 2015
- 24-hour Holter monitoring: Monday 14 December 2015
- 24-hour ABP monitoring: Thursday 17 December 2015
- ECGs: Tuesday 22 December 2015

All bookings will resume from Monday 4 January 2016.

**Paediatric ECG & Holter services**

Please be advised that paediatric ECGs and Holters will be unavailable from Monday 07 December to Monday 11 January 2016 because the reporting paediatric cardiologist will be on leave. Services will resume after Monday 11 January 2016. Any paediatric patients (12 years and younger) requiring urgent assessment during this time should be directed to the local Children’s hospital.