AOTEA PATHOLOGY
- CLINICAL UPDATE

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Improving Diagnostic Accuracy by Reducing Testing of Low Clinical Value

It is well recognised that tests with low clinical value form a significant percentage of the pathology laboratory's workload. This not only diverts resources away from essential testing, but may lead to false positive and false negative results and reduce overall diagnostic accuracy of a test.

At Aotea Pathology we strive to improve all aspects of testing for our referrers and their patients. This Clinical Update begins a focus on reducing testing of low clinical value to improve the accuracy of diagnosis for genital infections and lower gastro-intestinal tract tumours.

Should Cervical Screening Include Testing for Genital Infections?

The purpose of cervical screening is to detect cervical cancer and ultimately, to lead to a reduction in the incidence of this disease. Performing a speculum exam for a cervical smear may seem the ideal time to sample for genital infections, but is this the best use of laboratory resources? In 2013, approximately 40% of vaginal swabs and chlamydia/gonorrhoea samples that we received were collected in conjunction with a cervical smear, and less than half of these requests contained clinical details that suggested testing was appropriate.

Vaginal swabs

More than two thirds of vaginal swabs examined by microscopy were subsequently found to be negative for significant pathogens. The concept of taking a genital swab "while you are here" is understandable however:

In the absence of symptoms there is no value in testing and treating bacterial vaginosis or candida,

except during pregnancy or pre-termination.

Bacterial vaginosis should be a clinical diagnosis arrived at on the basis of symptoms and physical signs (watery discharge, odour, alkaline pH) together with laboratory demonstration of an altered vaginal flora. A shift in vaginal flora can also occur in healthy individuals therefore the abnormal appearance of gram stained smears is only clinically meaningful in symptomatic individuals.

Chlamydia and gonorrhoea

Opportunistic chlamydia screening is recommended in under 25 year olds, however the practice of collecting such samples at the time of a smear is consistent across age ranges indicating patient risk factors are not informing clinical practice.

Our 2013 data shows that you are significantly less likely to find Chlamydia (3%) or gonorrhoea (0.2%) in <25 year old patients at the time of a smear (P<0.01%). The risk factors for an STI, and thus prevalence, decrease in women over 25 years of age of which only 1% has chlamydia, and only 0.1% have gonorrhoea when tested at the time of a smear. Thus these patients are at a

disproportionately high risk of a distressing false positive result when tested inappropriately.

Recommendations

- **Screening for cervical cancer should be limited to evaluating that condition alone unless there are risk factors or clinical symptoms suggestive of a genital infection**
- **Opportunistic testing for chlamydia is only recommended for sexually active people aged under 25 years if they have risk factors (Chlamydia Management Guidelines 2008)**
- **Testing for gonorrhoea should only occur on the basis of epidemiological and behavioural risk factors; widespread random testing is not recommended in our low prevalence population because of the risk of false positive results (NZSHS gonorrhoea guideline 2014)**

Faecal Occult Blood Tests (FOBT)

Faecal occult blood testing is being targeted to improve specificity for lower GI tract tumours. Therefore, from the 17th November 2014 FOBT will no longer be performed on faecal samples submitted for the investigation of diarrhoea.

The purpose of FOBT is to screen for colorectal cancer. The test parameters are chosen to give a sensitivity and specificity appropriate for detecting small amounts of blood released from tumours of the lower GI tract.

Over the past year we have noticed increasing use of the FOBT for situations where it is not clinically appropriate. This includes requests to perform FOBT to aid the investigation and diagnosis of conditions such as melaena, gastro-enteritis, dysentery, ulcerative colitis, Helicobacter infection and a variety of other infectious and non-infectious conditions.

The use of FOBT for investigating bleeding associated with these conditions is not supported by the literature; false positive reactions are common, and false negative reactions can occur when lesions are not actively bleeding.

We suspect that the question you are really asking is “is there obvious blood present in the sample?” In this case, we are happy to comment on the presence of fresh blood if requested.

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a http://www.health.govt.nz/publication/chlamydia-management-guidelines
b http://www.nzshs.org/guidelines/NZ-gonorrhoea-guideline-version-2014-09-10.pdf