Lipid Update
Dr Charles Appleton
Pathologist in Charge - Biochemistry Department

The National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand have released a joint Position Statement on Lipid Management – 2005 to replace the NHFA 2001 Statement. The two differ in several aspects. A full copy can be downloaded or printed from www.heartfoundation.com.au on the Health & Lifestyle / Professional link. I shall summarise the current approach below.

Identify High Risk Individuals:
Patients at a higher absolute risk of a cardiovascular disease (CVD) event have the most to benefit from treatment. This group includes:
- Those with clinically evident existing vascular disease, diabetes mellitus, chronic kidney disease and familial hypercholesterolaemia.
- Aboriginal and Torres Strait Islander patients whose LDL cholesterol exceeds 2.5 mmol/L.
- Those whose absolute risk using the NZ CVD risk calculator exceeds 15%
- Those whose absolute risk using the NZ CVD risk calculator lies in the 10-15% range and who also have the metabolic syndrome or a first degree relative who developed CVD before the age of 60.

Targets:
- In high-risk patients with existing CHD, the recommended target LDL cholesterol (LDL-C) has been lowered to below 2.0 mmol/L.
- The HDL cholesterol (HDL-C) target remains above 1.0 mmol/L.
- The triglyceride target is now below 1.5 mmol/L.

How do we manage these patients?
- Lifestyle interventions must underpin lipid management in all patients.
- Lipid-modifying therapy is indicated for all patients in the high risk group (see above).
- Statin therapy is recommended for all patients with clinically evident vascular disease and should be commenced at the time of the first recognised event.
- Fibrates can be considered in combination with statins, particularly in those patients with the metabolic syndrome.
- Statin therapy should be considered for diabetics whose LDL cholesterol remains above 2.5 mmol/L after diabetic intervention.
- Fibrate therapy should be considered for diabetics whose triglycerides remain above 2.0 mmol/L after diabetic intervention.
- Statin therapy is always recommended for patients with familial hypercholesterolaemia.

Once at target, all high risk patients should have their lipid levels measured every 6-12 months.

Notes:
- Not all of the above patients will be eligible for PBS support.
- The NZ CVD risk calculator now plays a central role in guiding your patients’ management. This is available in several popular medical practice software packages and can be downloaded from http://www.nps.org.au/resources/Health_Professional_Tools/nz_cardiovascular_risk_calculator.pdf as a soft copy or printed out as hard-copy for the patient to take with them as an aide-memoire. Alternatively copies can be requested through QML Pathology Medical Liaison.
- The serum total cholesterol now plays no role in lipid management other than in the calculation of the total HDL cholesterol ratio for use in the calculator. This ratio is included in each QML HDL cholesterol report.
- The full document includes discussion regarding lipid-lowering drug safety, patient compliance failure, disadvantaged groups, renal impairment, etc.
- Medicare requires that for HDL cholesterol, LDL cholesterol, total/HDL cholesterol ratio etc to attract payment, the request form must include a specific HDL cholesterol request. On a request for “Lipid studies”, “Lipids”, etc, we can only perform and report total cholesterol and triglycerides.

### PATIENT CATEGORY

<table>
<thead>
<tr>
<th>PATIENT CATEGORY</th>
<th>LIPID LEVEL FOR PBS SUBSIDY</th>
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<tbody>
<tr>
<td>Patients with one or more of the following:</td>
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<tr>
<td>- existing coronary heart disease</td>
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<td>- symptomatic cerebrovascular disease</td>
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<td>- symptomatic peripheral vascular disease</td>
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<tr>
<td>- diabetes mellitus in patients aged 40 years or more</td>
<td>cholesterol &gt; 4.0mmol/L</td>
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<tr>
<td>Other patients at high risk with one or more of the following:</td>
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<tr>
<td>- diabetes mellitus in patients aged less than 40 years</td>
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<td>- familial hypercholesterolaemia</td>
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<tr>
<td>- family history of coronary heart disease (first degree relative less than 60 years of age)</td>
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<tr>
<td>- hypertension</td>
<td>cholesterol &gt; 6.5mmol/L or cholesterol &gt; 5.5mmol/L and HDL &lt; 1mmol/L</td>
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<tr>
<td>Patients with HDL &lt; 1mmol/L</td>
<td>cholesterol &gt; 6.5mmol/L</td>
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<tr>
<td>Patients not eligible under the above:</td>
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<tr>
<td>- men 35 to 75 years of age</td>
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<tr>
<td>- post-menopausal women up to 75 years of age</td>
<td>cholesterol &gt; 7.5mmol/L or triglyceride &gt; 4mmol/L</td>
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<tr>
<td>Other patients not included in the above</td>
<td>cholesterol &gt; 9mmol/L or triglyceride &gt; 8mmol/L</td>
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Interferon β Bioactivity
IMPORTANT CHANGES TO REFERRED TEST

(Fact Sheet from the Institute of Clinical Pathology and Medical Research, Department of Immunology)

Summary

Multiple Sclerosis (MS) patients may fail to respond well to interferon β (IFNβ) therapy for a number of reasons. A potential explanation for this is the development of neutralising antibodies to IFNβ (NABs). These antibodies are thought to bind the drug and prevent its binding to target receptors. IFNβ bioactivity is then lost and this can be measured using the IFNβ response marker, MxA.

About the test

The test measures the increase in MxA mRNA transcription following IFNβ injection. Failure to increase MxA levels after injection indicates the injected IFNβ has no bioactivity. This loss of bioactivity has been shown to be due to NABs in the serum1,2. MxA mRNA is measured and the patient is reported as a responder, where the MxA is upregulated more than 3 standard deviations above the mean of un-injected controls; or a non-responder, where the MxA levels are not different from un-injected controls. The maximal increase in MxA mRNA is 9 – 15 hours after injection, so patient blood needs to be collected then. The turnaround time for this test is usually two weeks.

Meaning of results

The development of NABs is a common phenomenon of IFNβ-therapy for MS1,2. The natural history and clinical significance of these antibodies warrants further study but their development offers a potential explanation for lack of clinical response to the drug. There are as yet no firm clinical guidelines in Australia as to the appropriate response should a lack of IFNβ bioactivity be identified. However, such patients would warrant closer surveillance, repeated testing and consideration might be given to alternative management where a persistent lack of IFNβ bioactivity is demonstrated.

Sample requirements

Samples should be collected 9 – 15 hours after treatment with IFNβ. The sample is collected in a specialised tube to stabilise the mRNA (PAXgene™ Blood RNA tube) that is not available through local pathology laboratories. Patients will need to request a PAX tube from the WMI NAB service (details beside) in advance to take to their local pathology lab to have blood collected for the test.

Transport at room temperature ASAP. If delayed more than 24 hours, send frozen. Result expected in two weeks.

When to order

Testing for IFNβ bioactivity may provide clinically useful information in any patient receiving IFNβ, but particularly when relapses or MRI activity continues to be seen despite treatment.

Results

Please note that although sample collection tubes can now be sent directly to patients to take to their pathology labs, results will only be sent to the patient’s physician to ensure appropriate response to the test result.

References


Information

For more information please contact:

Dr David Booth
Phone (02) 9845 8498

Dr Fiona McKay
Phone (02) 9845 8738 Fax (02) 9891 3889
Email Fiona_mckay@wmi.usyd.edu.au

www.icpmr.gov.au

IMPORTANT
Patients or Neurologists should request PAX tubes by phone or email to the address given.
Changes in Cytopathology Imaging Technology at QML Pathology

In one of our recent newsletters we announced plans to implement a ThinPrep Imaging System at QML Pathology. We are pleased to announce this new system will begin processing samples on Monday 22 May.

As of this date all ThinPrep slides will be scanned using the Imaging System and then reviewed by cytotechnologists using a specially integrated Review Microscope. If abnormal cells are identified the entire slide is re-screened. If no abnormal cells are identified, these slides are immediately archived and reported as negative.

It is anticipated the new system will improve work-flow in the laboratory through increased screening productivity and improved diagnostic performance.

The cost of providing the new ThinPrep technology will increase to $35.00 per test, which is not Medicare refundable. Please note that it is still necessary to prepare a conventional Pap Smear as all liquid based cytology remains an adjunctive technology in Australia.

For further information please don’t hesitate to contact our Cytology Department on (07) 3121 4485.

Changes to “High-Risk” HPV testing

Please be advised there has been a recent amendment to Medicare Item No 69486: A test for high risk human papilloma virus (HPV).

Patients who are “already undergoing annual cytological review for the follow-up of a previously treated HSIL” are now eligible to claim on this item number when undergoing the test. Previously only patients who had received excisional or ablative treatment for high grade squamous intraepithelial lesions (HSIL) of the cervix within the last two years, or who within the last two years had had a positive HPV test after excisional or ablative treatment for HSIL of the cervix, were eligible for the rebate for this test.

This change will substantially increase the number of women who are eligible for a Medicare rebate on this test and potentially minimise the number of women requiring annual cytological review in the future.

It may feel like we have spoken about nothing but the relocation of our Central Brisbane Laboratory since February last year. In light of this we are pleased to announce the relocation is complete and QML Pathology’s Central Laboratory is now housed at Murarrie.

Firstly we would like to thank you for your patience and support during our relocation. On the eve of the move many of you extended words of encouragement which were very gratefully received by our staff. This has been a period of great change for our 80 year old organisation, however we are beginning to settle in and believe our staff together with our new facility gives us the capability to deliver a better service for doctors and patients in Queensland and northern New South Wales.

Once again, we extend our thanks for your understanding and ongoing support.

At Home in Murarrie

Peter Freeleagus
State Manager
The newsletter has been prepared and published by QML Pathology for the information of referring doctors. Although every effort has been made to ensure that the newsletter is free from error or omission, readers are advised that the newsletter is not a substitute for detailed professional advice.

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For the convenience of our doctors and patients, we have listed the latest changes to QML Pathology’s network of clinics:

**NEW CLINIC**

**Mullumbimby**
0400 221 435
60 Stuart Street
Monday - Friday
8.30am - 1.00pm
2.00pm - 5.00pm

**CLINIC CHANGES**

**Albany Creek**
(07) 3325 0822
Albany Market Place, 1/720 Albany Creek Road
Monday - Friday
8.00am - 1.15pm
1.45pm - 4.00pm

**Loganholme**
(07) 3801 1073
Shailer Park Medical Centre, 70 Bryants Road
Monday - Friday
7.00am - 5.00pm

**Thornlands**
(07) 3821 4807
Shop 3, 3-5 Cleveland-Redland Bay Road
Monday - Friday
8.00am - 12.30pm
1.30pm - 4.00pm

**Tweed Heads West**
(07) 5536 8796
Shop 4, Kennedy Plaza Shopping Centre
97 Kennedy Drive
Monday - Friday
7.30am - 1.00pm

**Wynnum**
(07) 3396 9881
6/86 Edith Street
Monday - Friday
7.00am - 12.30pm
1.00pm - 5.00pm

Saturday
7.00am - 11.00am

Please contact your local branch for further information.