Operational Update for Otago/Southland Community Referrers

May 2014

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TEST RELATED

Levetiracetam

The laboratory receives a number of requests for therapeutic monitoring of this anticonvulsant. Levetiracetam is often used as an adjunct therapy in the treatment of partial seizures. It is excreted mostly unchanged in urine and may accumulate in renal impairment. There are no significant drug-drug interactions. It is generally considered a 'safe' drug with an excellent safety profile. Its main side effects are tiredness, lassitude, dizziness and somnolence. Routine monitoring of plasma levels is not required except where there are questions of adherence to prescribed therapy or rarely for assessment of toxicity in renal failure.

In consultation with the Neurology Department at Dunedin Hospital, Southern DHB has elected not to fund the routine monitoring of the assay of plasma levetiracetam. If testing is required for compliance purposes, a request will need to be made to the Clinical Laboratory Advisory Committee using the DHB application form.

For application from General Practice please contact either jan.parker@sclabs.co.nz or roger.barton@sclabs.co.nz for a copy of the form.

Mantoux Testing

Due to the widespread move to Quantiferon-TB Gold it is becoming difficult for staff to meet the competency requirements for Mantoux Testing. As of May 1 2014, Mantoux testing will be offered at two sites only in Otago and Southland:

- Hanover Street in Dunedin
- Don Street in Invercargill

In all other areas Quantiferon-TB Gold should be requested.

Note: Quantiferon Gold has not been fully validated for children under 7. Requests for children under 7 should therefore be referred to the local Medical Officer of Health in the first instance.

Zika Virus

Zika virus is a mosquito-borne virus that is closely related to dengue virus. Outbreaks have been reported in Africa, South East Asia, and more recently in the Pacific Islands (French Polynesia, New Caledonia, Cook Islands and Easter Island). Infection is often asymptomatic but when symptomatic the infection usually presents with fever, arthralgias (especially of the small joints of the hands and feet), myalgias, headache, conjunctivitis and a maculopapular rash. The incubation period is typically 3-12 days. There is no specific therapy for Zika virus and acute symptoms usually resolve within 4-7 days. Post infection asthenia seems to be frequent. The main differential diagnoses are measles, rubella, dengue and chikungunya. If Zika virus infection is suspected (appropriate travel history and clinical syndrome):

- Order Zika virus testing (IgM, IgG, and PCR) from the local laboratory – acute serum (taken within 5 days of symptom onset) and convalescent serum (2-3 weeks later) should be taken. The two samples are important to rule out false positive tests due to cross reactivity with similar viruses such as Dengue
- Overseas travel details and patient clinical history including the onset day and patient's DHB **must** be provided on the lab form – onset date is extremely important to ensure the most appropriate test is performed
- The local laboratory will forward samples to ESR who will arrange testing at an Australian Arbovirus Reference Laboratory (no labs in New Zealand currently test for Zika virus)

Thyroid Function Test monitoring

Thyroid function tests (TFT) are some of the most commonly requested endocrine tests performed by the biochemistry laboratory. They are used both for the investigation and monitoring of thyroid disease. Hypothyroidism is characterised biochemically by low plasma or serum free thyroxine (FT4) concentration and elevated Thyroid Stimulating Hormone (TSH). Assay of free tri-iodothyronine (FT3) is unhelpful in making the diagnosis or in monitoring as concentrations are not consistently low and are commonly within the reference interval. Treatment with replacement doses of thyroxine increases FT4 and lowers TSH. The therapeutic target should be a normal TSH and clinical euthyroidism. TSH levels typically take 6-8 weeks to reach nadir after starting or changing therapy and so checking TSH levels before 2 months has elapsed is unhelpful as the TSH concentration may still be falling. Once a stable dose of thyroxine replacement has been achieved, monitoring every 6 to 12 months is appropriate. Measurement of TSH alone is sufficient unless there are concerns about adherence to prescribed therapy.

In secondary (pituitary) hypothyroidism, FT4 and clinical findings must be used to guide replacement because the condition is caused by low TSH. Where there is an established diagnosis of subclinical hypothyroidism (normal FT4, elevated TSH, positive or negative thyroid antibodies) annual review is sufficient.

More frequent monitoring may be required in patients with hyperthyroidism (high FT4 and/or FT3; low or suppressed TSH). Because TSH remains suppressed for some time after initiation of anti-thyroid therapy, monitoring with TSH and FT4 every 4 weeks during the early stages of therapy is recommended. Once the patient is clinically stable, monitoring of TFT can be changed to 2 monthly. In difficult to manage hyperthyroidism, more frequent testing may be indicated but this should be dictated by previous results and clinical findings.

Routine monitoring of full blood count in patients on anti-thyroid medication is not recommended because agranulocytosis is rare and, when it does occur, onset is sudden. Instead, patients should be warned to report the occurrence of fever, sore throat or infection immediately.

Reference: Management of thyroid dysfunction in adults. *Best Practice Journal* December 2010 Vol. 33, 22-32

Influenza Testing

With the beginning of the flu season we are starting to see requests for respiratory virus testing, often with no clinical details provided.

The diagnosis of influenza is usually a clinical one and virological confirmation adds little to patient management except in hospitalised patients. Public health surveillance for influenza is carried out through designated sentinel practices. The respiratory virus PCR test is indicated for patients with severe, unexplained lower respiratory tract infections or for a suspected outbreak of an acute respiratory tract illness. Southern Community Laboratories/Medlab South will only accept specimens for respiratory virus PCR if the request is made or authorised by a Clinical Microbiologist or the Medical Officer of Health.

REQUEST FORMS

Allergy Testing - When making requests please tell us which panel you require: food or inhalants

Tetanus Vaccination – testing of IgG levels is funded for immune-compromised patients only; routine testing to see if a patient has immunity is non-diagnostic and charged to the patient. Please mark requests very clearly as pre and post vaccination, when the pre-test is unmarked it is treated as random and we get double charges as it is reprocessed when the post sample comes in

Who can request – a reminder that registered nurses and dentists are **not** recognized referrers under the laboratory contract. All volumes submitted to the data warehouse are required to be from requests from a Medical Practitioner

Hospital Referrers – please indicate clearly who results are to be reported to, without this the result will not go to your mailbox. If you want a copy to be sent to the GP then write the **name** of the GP or the request cannot be actioned.

COLLECTION CENTRES

Our collection centre closing times have always been given as the time at which staff finish, however the last patient(s) are normally admitted 15 minutes before this. This gives what is usually the sole staff member time to take the last samples, tidy up and pack the chilly bin for courier collection. Because of the number of patients who front right on closing time and then get very angry when they are declined we will be adjusting our 'official' closing times by 15 minutes and closing up accordingly.

Patients often complain about the waiting times in the early morning. This is an unbooked service and numbers presenting at a particular time can be very variable from day to day. With the move away from fasting requirements patients could be advised that waiting times are generally shorter late morning and mid-afternoon.

REPORTING TO LOCUMS

We have been unable to develop a standard practice for reporting to locums because different practices have different requirments, for long term placements many prefer the results to go to the locum but for short term placements results often need to go to someone else in the practice. It would help us considerably if you instruct the locum to clearly state on the referral form who the results are to be directed to.

DUNEDIN PRACTICE NURSES COURSE

Regrettably the 2014 course has been deferred to 2015 due to the small number of registrations.

HISTOLOGY ISSUES FEBRUARY 2014

The quality of referrals from Otago and Southland provided to the laboratory for Histology testing remains very poor.
For Feb 14, the Dunedin Laboratory received 2038 cases with 181 issues ~9%

Type of error	No	Comments
No site given	6	- 3 with 2 specimens
Site not clear	3	
Incorrect site	11	- right forearm on form, left forearm on container - right breast on form and container but on diagra marked as left - left ear on form, right ear on container - on form right neck, on container right cheek - on form specimen D urerovesical fold, on container rig ovarian fossa
Orientation	19	- non matching 7 - none given 12
No specimen	2	
Mismatch	4	- form and container non matching details
Unlabelled	4	
Poor label	28	- surname mis-spelt 4 or incorrect 7 - DoB incorrect 6 (two also NHI incorrect) - NHI incorrect 5
No clinicals	26	
Leaking	63	

Accurate diagnosis is only as good as the quality of the samples provided, please ensure that containers are clearly and correctly labelled and that clinical details are complete an

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UNFUNDED TESTS

Following submissions from various specialities a number of tests now in common use have been added to the funded test list. Tests that remain unfunded will require an individual application to the Clinical Laboratory Advisory Group (CLAG) and authorisation for the laboratory to process them. The authorisation form should then be attached to the requisition form. CLAG meets on a monthly basis, for urgent requirements between meetings contact Dr R Bunton, Chair of CLAG, or Dr B Rae.

Unfunded tests will be identified on receipt in the laboratory and a message sent back to the referrer advising that the sample will be held for one week pending possible authorisation

For hospital staff the applications forms and process documents are available on MIDAS – documents 72532, 72533 and 72534. For community referrers forms are available from jan.parker@sclabs.co.nz or roger.barton@sclabs.co.nz.

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