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All GPs
All Practice Managers

Dear Colleague,

Clinical Biochemistry: Update June 2019

I have met many of you over the last year and am pleased that you have found the updates useful. I am writing with some more pertinent biochemical pieces of information that I hope you will find helpful. This update includes information about Pathology IT, HbA1c, hyperkalaemia and faecal calprotectin.

Pathology IT
The pathology website is accessible outside of the trust and we are aiming to make it a valuable source of information. We have an A-Z list of all the tests we offer on our website with information regarding sample type, turnaround times and the clinical application:
http://www.ruh.nhs.uk/pathology

We are developing the pathology website so it will have clearer contact information, lipid clinic referral criteria and a page dedicated to primary care guidelines and test information. Any updates we send out will also be uploaded to the biochemistry page for future reference.

Earlier in the year I met with GP's representing all three CCG's. One of our main areas of discussion was improving the IT interface between the lab and primary care. I am aiming to review the biochemistry tests on ICE and improve the profiles so that they reflect both national and local diagnostic and referral pathways. We are working with the trust to try and improve issues with secondary care requesting and ownership of results.

There are two specific ICE changes to test requesting I would like to make you aware of:

1. Fasting for lipids is no longer required. We are changing the test names to reflect this from fasting and non-fasted lipids to Lipid profile (to include cholesterol, HDL, LDL, triglycerides, chol/HDL ratio and non-HDL) and Cholesterol (to include cholesterol, HDL, chol/HDL ratio and non-HDL)
2. When requesting PSA you will be asked to select whether it is being ordered for monitoring or diagnosis. We will append the age related referral reference ranges if it is for diagnosis or alert you to the cancer diagnosis if for monitoring.
   Some of you may be aware, PCRMG in 2008 advised using PSA age-related referral values. In 2016 they revised this to advise that any man aged 50-69 should be referred with PSA>3ng/ml. However, currently local urologists would like to maintain using 2008 values which is in line with other urology units locally. We are due to discuss this in a south west urology meeting. For further information please follow link:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/509193/Prostate_Summary_Sheet.pdf

HbA1c in patients under children and young adults

Following the previous letter advising against the use of HbA1c in children we have undertaken an audit. Worryingly HbA1c is still being requested for diagnosis in children. We excluded any request which seemed appropriate (clinical details suggesting insulin resistance such as obesity clinic/PCOS) and 2 months' worth of requests were reviewed. Diagnostic HbA1c was requested in 78 children younger than 18, and many were infants as young as 2 who sometimes had clear type 1 symptoms such as thirst, polyuria, weight loss, abdominal pain and fatigue. This is a serious clinical risk as a normal HbA1c is possible and may falsely reassure the clinician. Could you make sure this information is passed to all healthcare professionals?

Please note HbA1c is **NOT recommended** in the **diagnosis** of diabetes in the following patient groups:

- ALL children and young people
- Symptoms suggesting Type 1 diabetes (any age)
- Short duration diabetes of symptoms
- Patients at high risk of diabetes who are acutely ill
- Patients who have been taking medication that may cause rapid glucose rise for less than 2 months e.g. corticosteroids, antipsychotics
- Acute pancreatic damage/pancreatic surgery
- Pregnant women

WHO advise that these patients should have a fasting glucose.

Hyperkalaemia

There was a MHRA alert regarding hyperkalaemia in 2018 and a really useful video about hyperkalaemia can be found at: https://www.youtube.com/watch?v=9qpXCtr2Q-E

Useful management advice can be found at: https://www.thinkkidneys.nhs.uk/aki/wp-content/uploads/sites/2/2017/10/Changes-in-Kidney-Function-FINAL.pdf

Faecal calprotectin

Faecal Calprotectin is advised prior to non-urgent referrals to gastroenterology in patients with possible inflammatory bowel disease (age 16-45 years). To help remind you of NICE DG11 referral pathway we will be changing ICE requests so this comment can be seen above the request box. You will not need to tick any boxes in future to help speed up requesting.
Please be aware that some medications (e.g. NSAID's or proton pump inhibitors), coeliac disease, diverticulitis, gut infections and malabsorption may cause a false elevation in calprotectin.

Faecal calprotectin should not be used in;

- Patients with red flag symptoms (rectal bleeding, unintentional weight loss, nocturnal diarrhoea, anaemia, rectal mass, abdominal mass, significant history of bowel and/or ovarian cancer)
- Screening/surveillance for polyps or bowel cancer
- Patients >40 years old with a new change in bowel habit

Interpretation is as follows:

Faecal calprotectin ug/g	Action
<50	Calprotectin levels are not indicative of inflammation in the gastrointestinal tract. Patients with low calprotectin levels do not require referral to the gastroenterologists and should be managed according to clinical symptoms.
50-200	Borderline result. There may be mild inflammation, therefore exclude other causes of raised calprotectin such as gut infections, diverticulitis, cancer, polyps, non-steroidal anti-inflammatories, coeliac disease and cirrhosis then repeat in 6 weeks If persistently raised refer to gastroenterology as invasive investigation may be necessary.
>200	Elevated calprotectin levels at this level are indicative of active organic disease with inflammation in the gastrointestinal tract. As the test is being performed in the context of a clinical suspicion of IBD an urgent referral to gastroenterology should be considered.

We welcome any feedback you may have on our service and are always happy to provide support with requesting the most appropriate tests.

Yours sincerely

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