Focus on FIT

Can Faecal Immunochemical Testing (FIT) Improve the Pathway for Patients with Lower GI Cancers?

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At the ACB Focus meeting in April 2016, Alpha Laboratories organised a panel of experts to discuss the ramifications of the new NICE NG12 Guideline – Suspected cancer: recognition and referral, in relation to bowel cancer.

Professor Callum Fraser, Senior Research Fellow, School of Medicine, University of Dundee, opened the discussion with a reminder that over 26,000 people die of bowel cancer annually, making it the second most common cause of cancer deaths today. And, with over 40,000 diagnosed each year, it remains a major clinical problem.

Until 2015, NICE advised that patients with abdominal symptoms and pain should only have abdominal and rectal examinations and a full blood count. Also, the Scottish Intercollegiate Guidelines Network stated that faecal occult blood testing is too insensitive to be used in guiding investigations of symptomatic patients. Of course, at that time, these recommendations concerned the traditional, low sensitivity guaiac-based faecal occult blood test.

When NICE issued the suspected cancer recognition and referral, guideline NG12, in June 2015, the situation changed, since it included the re-introduction of tests for faecal occult blood (FOBT) in specific patient groups. However, this did not differentiate what type of FOBT should be used. Professor Fraser provided background on the more advanced technologies now available and explained how quantitative Faecal Immunochemical Tests (FIT) are very useful in assessment of patients with lower abdominal symptoms.

He concluded by highlighting the growing body of evidence that FIT could be used as a rule-out test for significant bowel pathology (cancer, higher-risk adenoma or inflammatory bowel disease), and that NICE were in the process of reviewing the latest data on FIT, with a view to publishing new guidelines on its application in the triage of symptomatic patients. In the meantime, much debate exists amongst laboratory professionals, gastroenterologists, colorectal cancer surgeons and healthcare professionals about how to introduce FIT in routine clinical practice.

Dr. Ian Godber, Consultant Clinical Scientist, NHS Lanarkshire, then outlined how he had introduced FIT into his Health Board trust. He reviewed the key information from his initial evaluation, now published in CCLM¹, which identified that FIT could be used as a rule-out test for patients with significant bowel disease.

The study was based on findings from 909 invited patients scheduled for colonoscopy. Of these, 507 returned faecal samples which were analysed on the HM-JACKarc automated quantitative FIT system for faecal haemoglobin concentration (f-Hb).

Of these, 484 had successful colonoscopies, which identified 11 cancers, 19 higher-risk adenomas and 15 cases of inflammatory bowel disease, detection rates in keeping with other UK statistics. The study categorised significant bowel disease as colorectal cancer, higher-risk adenomas and inflammatory bowel disease. Hyperplastic polyps, diverticular disease (DD), haemorrhoids and other less clinically important findings were considered as the non-diseased group. There were statistically significant differences in the f-Hb concentrations between these two groups.

Dr. Godber concluded that there is firm evidence that f-Hb is related to colorectal disease severity and future risk and that FIT is a good test to rule-out significant bowel disease in patients with lower abdominal symptoms. Using a cut off of 10 µg Hb/g faeces, FIT provided a high negative predictive value (NPV) for significant bowel disease (96.2%). Measurement of f-Hb, in patients referred from primary care, could save considerable endoscopy resources and enable fast tracking of those with a high suspicion of neoplastic disease, patients with high f-Hb.

Next to present was Mr Paul Skaife, Consultant Colorectal Surgeon, Aintree University Hospitals NHS Foundation Trust. He explained that, in clinical care, practice is governed by time constraints with the cancer referral two week wait rule. When the GP first refers a patient, secondary care has two weeks to see them and is financially constrained if those targets are not met. A diagnosis is required within 31 days. If a diagnosis is determined before 31 days, then the next 31 day timeline, for treatment, is initiated. Thus, there is a maximum target here of 62 days from referral to treatment.

This treatment may be with surgery, chemotherapy, radiotherapy or may be palliative care. There are time constraints at each step of the clinical pathway. Introducing any new target, safety or quality mechanism must fit in with these time constraints. Currently NICE have not included such considerations.

Within those being referred within the two week wait rule, current literature suggests between 9.4 and 16% of patients who meet the criteria for urgent referral will have cancer. More than 70% will go through the diagnostic pathway but will not have cancer. Data from 2013/14 showed more than 200,000 fast track referrals did not lead to diagnosis of significant bowel disease. This has significant consequential impact on the financial and human resources of our health care system.
A study using a qualitative Point of Care (POC) FIT in Aintree in 2012, looked at patients who were admitted, without rectal bleeding, through the fast track referral. Each patient had a FIT done at POC and was classed as positive or negative based on the cut-off of this FIT, which was 8 µg Hb / g faeces.

Out of 137 cases, there were 17 cancers in the FIT positive group, and none in the negative group. In essence, if the two week wait referral criteria were met, and a FIT positive was found, then there was a 60% chance of cancer being present. That seemed a reasonable end result, but more importantly, FIT provided a good rule-out test. The NPV, at least in this series of patients, was 100%. So if the two week wait criteria were met, but a patient had a negative FIT result, then cancer was not present.

The clinical impact of these data is that FIT is a good discriminatory test. A negative test result informs that cancer is not present. The result does not tell you what the patient has, but it does inform you of the absence of disease.

This information has the potential impact in deciding what sort of investigations patients are going to have. It may be the patients with FIT negative results have still got symptoms and will require a colonoscopy but, with the time constraints in current clinical practice, it means that they do not need that colonoscopy within 31 days of the diagnosis.

It is very important for clinicians to define which patients need to follow a time restrained clinical pathway, those which don’t, and more importantly, which require a colonoscopy straight away, within a couple of weeks or not at all. Symptoms can be re-assessed, further tests can be performed, perhaps for markers other than FIT. Perhaps a patient will go on to get colonic imaging anyway, but it just does not have to be within the constrained time frame.

Unanswered questions included the following. Does FIT belong in primary care? Is FIT discriminatory and can it define who should be referred? Does the patient actually need a two week wait referral in the first place?

Mr Skaife concluded that FIT is a good test and the available science supports its use. It is the applicability that is still under question. Where does this test belong? Qualitative FIT provides a quick assessment, however, quantitative FIT is more interesting. But there’s an inherent delay in getting a f-Hb result. If a sample is sent off, does the referral for colonoscopy go on hold, until the FIT result is available to decide if this patient is going to be referred or not? The further assessment under way by NICE will need to modify the patient pathway to decide where FIT is most useful. Does it fit in primary care? Does it fit in secondary care? Or both?

Following these presentations, there was an interactive question and answer session between the audience and the panellists. There were some excellent points raised including: could other biomarkers be useful in identifying colorectal cancers, who should make the decision on the results from the FIT and what path should the patient follow?

Videos of the entire presentations given at ACB Focus ‘The NICE NG12 Guideline: a FIT Outcome’, can be viewed at www.alphalabs.co.uk/fit#video including the Q&A session that followed. For more information on HM-JACKarc automated FIT testing visit www.alphalabs.co.uk/FIT

Please contact marketing@alphalabs.co.uk if you are interested in attending similar future events.