PAEDIATRIC IRRITABLE BOWEL SYNDROME AND FUNCTIONAL ABDOMINAL PAIN

Background

- 10-15% school aged children experience abdominal pain, however 90% of children DO NOT have organic pathology.
- Functional abdominal pain (FAP) has defined criteria for classification (Rome IV classification) and includes functional dyspepsia, Irritable bowel syndrome (IBS), abdominal migraine and functional abdominal pain - not otherwise specified (FAP-NOS): 65% are IBS but there can be overlap (2)
- FAP is multifactorial but anxiety and parental attention can make symptoms worse whereas familial acceptance and supporting the child's coping skills can improve symptoms
- In the absence of red flags it is reasonable to limit investigations to a 'one stop targeted panel': gaining parental and child acceptance of the functional nature at this stage is important

Features of all functional gastrointestinal diagnoses:

- >3 episodes / month for minimum of 2 months (not only happening during physiological events e.g. eating, menses)
- In IBS, pain often related to having a bowel motion with change in stooling –can be constipation or diarrhoea
- Age > 3 yrs.
- Daily activities affected
- Diagnosis can be based on selective negative testing rather than diagnosis of exclusion
- After appropriate evaluation, cannot be explained by another medical condition

Assessment:

Important specific factors in history:

- Pain location, features etc, bowel habit and changes, timing, exacerbating and relieving factors. Features of FAP often include ill-defined pain, poorly localised / periumbilical, episodes often lasting < 1hr and resolve spontaneously; usually well between episodes
- Dietary triggers: irregular eating patterns, overeating, excessive dietary intake of sugars/ high fat food/ caffeinated & carbonated drinks, milk products (lactose), eating quickly and air swallowing.
- Physical triggers: recent viral illness, food intolerances, chronic illness, low activity levels, overt fatigue
- Psychosocial: school/ family / peer issues/ symptoms of anxiety and /or depression (may include social phobias, separation anxiety, generalised anxiety), excitement, significant life events/ influence of social media. School absence can be additional issue (9)
- Family history may be positive for IBS, reflux, constipation, mental health issues. Family may have health-seeking behaviours (NB important to elicit history of coeliac disease, IBD, peptic ulcer disease as this increases risk of organic disease)

Parents/ children are often frustrated / concerned that child has a 'serious' disorder so worth asking what they are worried the cause is so that this can be addressed

Who to refer?

Initial assessment can take place in Primary Care setting and if no red flags in history or examination, functional nature of symptoms should be discussed at outset

'One stop targeted panel' (as per flowchart) can be performed if appropriate: need to explain fully **first** the functional nature of symptoms, **then** that tests will be done to rule out any other conditions but that **results expected to be normal** and will support functional nature of symptoms

As well as 'red flags' (see below), also consider referral if:

-an organic cause is considered or discovered
-repeated A& E attendances
-repeated attendances to GP or reinforcement needed by Secondary Care

How and where to refer?

Refer for reason noted above: new acute and OPD referrals from Edinburgh for suspected IBS, FAP, refer to Medical Paediatrics RHCYP. Referrals of other GI issues, e.g. suspected IBD refer to Paediatric GI RHCYP.

West Lothian, Fife and the Borders should initially be sent to the local DGH Paediatric service to be seen (Consultant with special interest in GI in each DGH - contact details in Ref Help – link below) and they will refer to GI Service RHCYP, if required for advice/ further management. Most conditions can and should be worked up and managed locally.

Referral via SciStore can be marked ROUTINE / URGENT / FOR ADVICE ONLY as appropriate

How to approach management?

Principles of management:

1. Reassurance and education: supported if necessary, by investigations
2. Focus on improvement in functioning rather than complete resolution of pain
3. Consider psychological and pharmacological intervention if pain persists

- Emphasise that focus of management is to improve function and coping rather than complete resolution of pain: with attainable goals including normal school attendance, involvement in extra-curricular activities, normal sleep patterns etc. Encourage linking in with school/ seeking support from school. Advise that expected positive outcome.
  'This type of pain is really common in people of your age, and while we may not be able to stop you feeling the pain, there are lots of ways we can help you continue doing the things you enjoy'

- Reassurance that the pain is real but that does not mean that there is an abnormality in the workings of the bowel

- Highlight criteria on which diagnosis of functional symptoms made: the nature of the pain, continued normal growth, normal wellbeing between episodes, absence of symptoms/ signs of organic disease.

- Highlight that pain is exacerbated by both negative (e.g. anxiety/ stress, low mood) and positive (e.g. excitement) emotions which can result in the physical symptom of abdominal pain, diarrhoea, constipation. Emphasise that this is similar to how it can result in other physical changes such e.g. hands shaking when scared, blushing when embarrassed, going to the toilet more often before exam, feeling sick when you see something disgusting etc

which are all normal feelings and encourage to explore potential stressors. Emphasise that learning to cope with stress using relaxation strategies can reduce recurrent abdominal pain

- Education regarding the proposed mechanisms of functional abdominal pain (e.g. visceral hypersensitivity, reduced pain threshold, impaired gastric relaxation response to meals, excessive brain sensitivity) explains the pain and sets the basis for therapeutic interventions

Useful metaphors to explain persistent physical symptoms when no active disease process identified:

Problem with the 'software' and not the 'hardware'

It's like when a car/ piano is out of tune or a radio is turned on too loud

Your body's defence system is like an over sensitive alarm system – like the smoke alarm that can't be stopped!

The nerves keep firing even when they don't need to

'The body has different ways of coping with pain. Sometimes after a mild illness / event, the way the body processes pain changes. Nerve signals can cause the gut to be more sensitive to triggers that do not usually cause pain, like stretching or bloating, so that a lot of the sensations that are usually filtered out are felt deeply. The body recognises this as pain and sends out more signals to try to address this pain, which then can worsen the pain. This is called up-regulation of pain pathway / receptors 'body's pain thermostat is set too high'

- Discuss impact of any illness models within the family and address any specific concerns the parents and child may have for example, cancer, IBD
- Social treatment: 'social' aims of treatment- for example going back to school 3 days a week after prolonged absence, going for a 10-minute walk daily
- Other therapies: e.g. yoga reduces anxiety, improves tone and increase feelings of well-being- no robust evidence for the effectiveness
- Psychological support: there are many useful apps and online resources for anxiety/ stress/ pain management (see below): recommend the child uses breathing, relaxation, distraction, visualisation exercises for example those on the HospiChill app. If a young person is under a medical team at RHCYP/ SJH they can be referred to Paediatric Psychology and Liaison Service for psychological support if they meet the referral criteria which stipulate that the CYP needs to be under the care of an RHSC/ SJH consultant, **and** have a physical health condition, **and** are experiencing psychological or behavioural issues related to their physical health condition, **and** the difficulties impact significantly on day-to-day functioning
  Referral to CAMHS may be required depending on severity of psychological distress/ systemic issues.

- Diet: common to ascribe pain to food intolerances. Current evidence suggests additional **fibr**e is unlikely to be helpful in children with FAP unless it coexists with constipation
  Food exclusions (such as **dairy/ lactose or gluten**) should be limited and reintroduction attempted to ascertain efficacy. IF a family are adamant they want to try GFD or are within the first month of a low or GFD then coeliac screen recommended. NOT enough evidence to routinely recommend a low fermentable, oligosaccharide, disaccharide, monosaccharide and polyols (FODMAP) diet in children. Non-coeliac gluten and wheat sensitivities are relatively new, but distinct, clinical phenomena adding to the challenge (see IBS food fact sheet link below). There is no place for skin- prick testing / specific IgE testing. Children requiring dietetic assessment should be referred by the General Paediatrician/ Consultant Paediatric Gastroenterologist.

- **Probiotic**: limited evidence of benefit but can consider trial e.g. Lactobacillus rhamnosus GG available in Health Food shops although no real convincing superiority of a probiotic strain has been demonstrated.

- Pharmacological options:
  Short trial of **Peppermint oil** or **antispasmodics e.g. Mebeverine, Hyoscine butylbromide** may be considered. If features of dyspepsia or constipation may benefit from trials of treatment e.g. **PPI, laxative** (see https://bnfc.nice.org.uk or www.ljf.scot.nhs.uk for dosages)

Useful resources:

CAMHS link to general online resources:
https://services.nhslothian.scot/camhs/Resources/Online/Pages/default.aspx

Helpful Apps:

Mindshift (free CBT) :
https://play.google.com/store/apps/details?id=com.bstro.MindShift&hl=en_GB

HospiChill (Preparation for coming to hospital and appointments but also great activities to reduce stress, manage anxiety, pain) http://hospichill.net/index.html

Relax Lite (relaxation):
https://play.google.com/store/apps/details?id=com.saagara.relaxlite&hl=en_GB&gl=US

Smiling Mind (relaxation)
https://play.google.com/store/apps/details?id=com.smilingmind.app&hl=en_GB&gl=US

Chill Panda (for children and adults who want to learn how to mange stress and worry and feel better) https://www.nhs.uk/apps-library/chill-panda

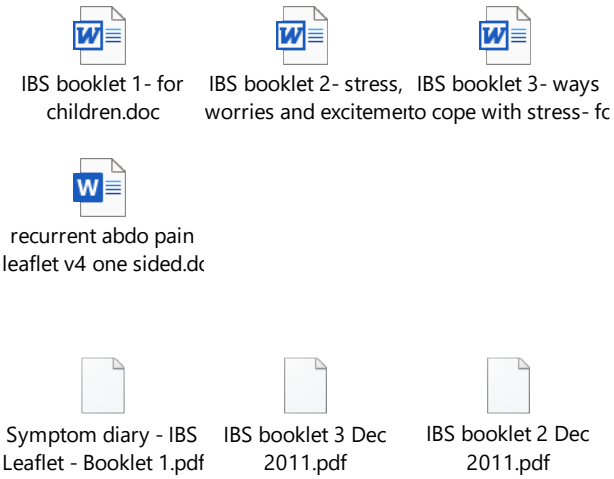
Stress control classes (free online): https://services.nhslothian.scot/stresscontrol/Pages/default.aspx (adult classed but suitable for mid-teens upwards)

IBS Food fact sheet: https://www.bda.uk.com/uploads/assets/5eded447-080a-4113-9b3cfc70e432fbd5/IBS-food-fact-sheet.pdf

Link to Ref Help Faecal calprotectin:
https://apps.nhslothian.scot/refhelp/guidelines/ResourcesLinks/calprotectin%20in%20children%20NHSL%20Sept%202018.pdf

Link to RefHelp H Pylori:

https://apps.nhslothian.scot/refhelp/guidelines/ResourcesLinks/Paed%20GI%20-%20Heliobacter%20Pylori%20%20RHCYP%2022%20Aug%202019.pdf



References:

1.Link to Ref Help (NHS Lothian): Contact details and referral pathways in Paediatric GI as well as information on related problems e.g. acute /chronic diarrhoea
https://apps.nhslothian.scot/refhelp/Paediatric/PaediatricGI#tabs2

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5. Best practice and fifteen-minute consultations: Fifteen-minute consultation on the healthy child: Bowel habit in infants and children
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8. Improving Communication with adolescents: BMJ ADC Educ Clin Prac 2011 https://ep.bmj.com/content/97/3/93

9. Fifteen-minute consultation for a child not attending school: a structured approach to school refusal: BMJ ADC Educ Clin Prac 2013 https://ep.bmj.com/content/101/1/21.abstract