

Chronic Abdominal Pain and Functional Abdominal Pain Syndrome in Children

Dr Raveen Shahdadpuri, Consultant, Department of Paediatrics, General Paediatrics & Adolescent Medicine Service, KK Women's and Children's Hospital

Introduction

Abdominal pain is one of the most common complaints for which children and their carers seek medical attention. This is particularly true for chronic abdominal pain which has been ongoing for a prolonged period (as opposed to sudden onset of acute abdominal pain).

A child who chronically complains of abdominal pain is often a formidable challenge. Although the symptom usually indicates a benign problem, the parents may be very worried, the child may be in distress, the practitioner may be concerned about ordering tests to avoid missing serious occult disease, and the family may be enmeshed in psychosocial complexities.

Management of this problem can be time consuming and frustrating. Yet, in only a small number of such children is the abdominal pain caused by a true underlying organic disease.

In most children, the pain is functional, that is, without demonstrable evidence of a pathologic condition such as an anatomic, metabolic, infectious, inflammatory, or neoplastic disorder.¹

For the purposes of this article, I will focus on chronic abdominal pain and in particular, functional abdominal pain syndrome (FAPS), as the management of this is important and to help avoid any unnecessary painful and expensive testing.

Background

Chronic abdominal pain is also known as recurrent abdominal pain (RAP) in medical literature and these terms are often used interchangeably. However, the term 'recurrent abdominal pain' as currently used clinically and in the literature should be retired and replaced by functional abdominal pain syndrome (FAPS).

Functional abdominal pain syndrome (FAPS) is the most common cause of chronic abdominal pain. It is a specific diagnosis that needs to be distinguished from anatomic, infectious, inflammatory, or metabolic causes of abdominal pain.

Apley first defined recurrent abdominal pain (RAP) as three or more episodes of abdominal pain severe enough to interfere with a child's activities and occurring during a period longer than three months.² Historically, the incidence of recurrent abdominal pain has been reported to be 10% to 15% in children between 4 to 16 years of age.³

Further reports describe the occurrence of RAP to be between 15% and 20% of American middle school and high school students, typically affecting children between the ages of 4 to 12 years.^{4,5}

Literature from local and regional centres, while not as numerous, is available. In a study performed in rural and urban school children in Malaysia, Boey et al found that the overall prevalence of RAP among 1549 school children (764 boys; 785 girls) was 10.2%.⁶ The only available

Rome III Diagnostic criteria* for Functional Abdominal Pain Syndrome (FAPS)

Must include all of the following:

1. Continuous or nearly continuous abdominal pain
2. No or only occasional relationship of pain with physiological events (e.g. eating, defecation, or menses)
3. Some loss of daily functioning
4. The pain is not feigned (e.g. malingering)
5. Insufficient symptoms to meet criteria for another functional gastrointestinal disorder that would explain the pain

*Criteria fulfilled for the last three months with symptom onset at least six months before diagnosis

Rome III criteria – Reference
http://www.romecriteria.org/assets/pdf/19_Romell_apA_885-898.pdf

▲ Table 1

data for Singapore children was published by Oh et al in 2004 who reported that the incidence of RAP was 23.4%. The mean age was 11.7 years (range, 6 to 17 years) of which 62.4% were female.⁷

Functional abdominal pain syndrome

Functional abdominal pain syndrome (FAPS) represents a pain syndrome attributed to the abdomen that is poorly related to gut function, is associated with some loss of daily activities, and has been present for at least six months. The pain is constant, nearly constant, or at least frequently recurring. FAPS appears highly related to alterations in endogenous pain modulation systems, including dysfunction of descending pain modulation and cortical pain modulation circuits.

Symptom-based diagnostic criteria (the Rome III criteria last updated in 2006) recently have been established for the classification of functional gastro-

Alarm symptoms or signs suggesting organic disease

The presence of alarm symptoms or signs, includes but is not limited to:

- Involuntary weight loss
- Deceleration of linear growth
- Gastrointestinal blood loss
- Significant vomiting
- Chronic severe diarrhoea
- Persistent right upper or right lower quadrant pain
- Unexplained fever
- Family history of inflammatory bowel disease, or
- Localised tenderness in the right upper or right lower quadrants,
- Localised fullness or mass effect
- Hepatomegaly
- Splenomegaly
- Costovertebral angle tenderness
- Tenderness over the spine, and
- Perianal abnormalities

Note: Abnormal or unexplained physical findings is generally an indication to pursue diagnostic testing for specific anatomic, infectious, inflammatory, or metabolic etiologies on the basis of specific symptoms in an individual case. Significant vomiting includes bilious emesis, protracted vomiting, cyclical vomiting, or a pattern worrisome to the physician.

▲ Table 2



intestinal disorders (FGIDs) in children (Table 1). FAPS is one of the FGIDs and is distinct from other categories of FGIDs such as irritable bowel syndrome (IBS) and functional dyspepsia. FAPS commonly is associated with a tendency to experience and report other somatic symptoms of discomfort, including chronic pain thought to be related to the gynaecologic or urinary systems.

Clinical evaluation

The most crucial part of the clinical evaluation of any child with chronic abdominal pain is a thorough history and a detailed clinical examination.

In almost all cases of FAPS, clinical examination will be normal and no presence of any alarm symptoms or signs. If this is so, there is no need for any routine diagnostic or screening tests. In contrast, the presence of alarm symptoms or signs (Table 2) may suggest a higher likelihood of organic disease and this is an indication for the performance of diagnostic tests and/or referral to a paediatric specialist, whereas in the absence of alarm symptoms, diagnostic studies are unlikely to have a significant yield of organic disease.

Functional abdominal pain generally can be diagnosed correctly by the primary care clinician in children 4 to 18 years of age with chronic abdominal pain when there are no alarm symptoms or signs and the physical examination is normal, without the requirement of additional diagnostic evaluation.

In reality, testing may also be performed to reassure the patient, parent, and physician of the absence of organic disease, particularly if the pain significantly diminishes the quality of life of the patient. However, this should try to be avoided and not done routinely but only after the patient and the parents have been adequately counselled about FAPS and still fail to be reassured.

Management

Education of the child and the family is an important part of treatment of the child with functional abdominal pain. It is often helpful to summarise the child's symptoms and explain in simple language that although the pain is real, there is most likely no underlying serious or chronic disease. It may be helpful to explain that chronic abdominal pain is a common symptom in children and adolescents, yet few have a disease.

It is important to provide clear and age-appropriate examples of conditions associated with hyperalgesia, such as a healing scar, and manifestations of the interaction between brain and gut, such as the diarrhoea or vomiting children may experience during stressful situations (e.g. before school examinations or important sports competitions).

It is recommended that reasonable treatment goals be established, with the main aim being the return to normal function rather than the complete disappearance of pain.

Medications for functional abdominal pain syndrome are best prescribed judiciously as part of a multifaceted, individualised approach to relieve symptoms and disability. It is reasonable to consider the time-limited use of medications that might help to decrease the frequency or severity of symptoms, though there is a paucity of evidence in the medical literature to support this. Any benefit is most likely due to a placebo effect.

The only intervention of proven benefit is the biopsychosocial model of care.^{8,9}

As such, in refractory cases despite normal clinical examination and absence of any alarm signals, and clear explanation and reassurance by the GP, referral to a clinical psychologist for cognitive behaviour therapy (CBT) has been shown to be of benefit.

Summary

- Chronic abdominal pain is a very common cause for seeing a GP.
- The majority of cases are due to FAPS.
- In the context of a typical history and absence of any alarm signs and symptoms, no further diagnostic testing is usually needed.
- Mainstay of management is adequate explanation and reassurance by the attending doctor.
- For recalcitrant cases, referral to a clinical psychologist for CBT may be warranted.

GP CONTACT

GPs can call for appointments through the Specialist Outpatient Clinic Appointment Centre at 6294 4050. ✓

References

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