PEER REVIEWED

Managing functional abdominal pain syndrome

Not just a pain in the guts

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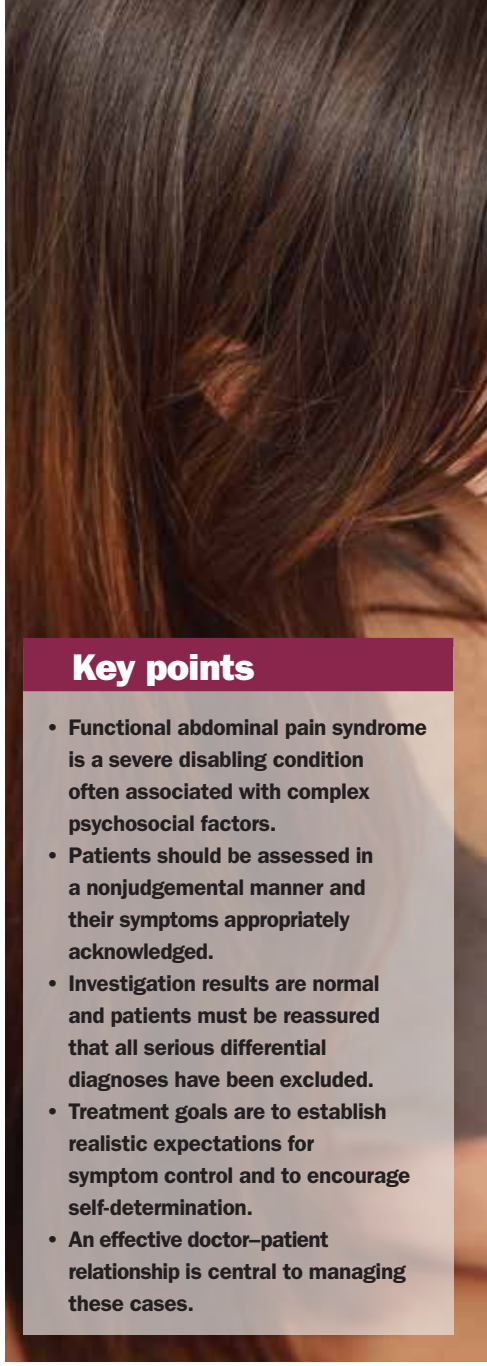
Functional abdominal pain syndrome belongs to a group of challenging conditions causing severe disabling symptoms without demonstrable objective abnormalities. An effective doctor–patient relationship is absolutely necessary and often sufficient to manage these cases.



Key points

- **Functional abdominal pain syndrome is a severe disabling condition often associated with complex psychosocial factors.**
- **Patients should be assessed in a nonjudgemental manner and their symptoms appropriately acknowledged.**
- **Investigation results are normal and patients must be reassured that all serious differential diagnoses have been excluded.**
- **Treatment goals are to establish realistic expectations for symptom control and to encourage self-determination.**
- **An effective doctor–patient relationship is central to managing these cases.**

Functional abdominal pain syndrome (FAPS) is uncommon but challenging, with substantial overlaps with other functional gastrointestinal disorders. Patients with FAPS frequently have extensive symptoms and manifestations of psychological factors. The pain is severe, prolonged and often continuous.

The dominant mechanisms in FAPS relate to aberrant central interpretation and amplification of pain, whereas with irritable bowel syndrome (IBS) and nonulcer dyspepsia peripheral visceral afferent signals are dominant. However, the high prevalence of psychosocial pathology seen in FAPS converges with that of severe IBS in which brain-gut axis signalling dysfunction becomes dominant (see Box 1 for the different definitions of FAPS and IBS).

Managing FAPS is challenging and requires an effective doctor–patient relationship. However, treatments rarely cure the syndrome and realistic long-term expectations are necessary.

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Illustrative case

A 38-year-old single mother of two children has long-standing severe constant upper abdominal pain with no relation to any specific activity. The pain is present for most of her waking hours. She denies connection with eating, diet, movements, physical activity or her menstrual cycle. There is no relief with defaecation, although she has a tendency to constipation. Her weight has increased by 12 kg in the past decade. She perceives no association with stress or emotional factors. She sleeps poorly and admits to constant fatigue. She has a vague diagnosis of depression requiring various antidepressants over the years. She is not in a relationship but has had a few failed ones since having children. She has concerns about possible drug use by her daughter and has financial struggles. Her social supports are limited with few friends and family. She had an unhappy childhood with an alcoholic father, a verbally abusive mother and, later, a physically abusive husband. She has been extensively investigated in the past decade by numerous specialists, and has had multiple endoscopies, colonoscopies and abdominal imaging without any abnormality found. She has also had a cholecystectomy without improvement. She feels that no one knows what is going on

and that the doctors to date have considered the problem to be in her head. She has been unable to work because of the pain and requests an immediate solution.

On examination, she is obviously frustrated and angry when recalling previous medical consultations. She has diffuse tenderness over her upper abdomen, with frequent but inconsistent grimacing on palpation at numerous locations. There is no abdominal wall pain and no exacerbation with movements. There are no palpable masses.

Definition

FAPS is defined by the Rome III criteria (Box 1) and features chronic, continuous, severe abdominal pain, unrelated to physiological events, not feigned but with substantial consequent disability. FAPS is unique among the functional gastrointestinal disorders in that the dominant mechanisms relate to central pain processing rather than peripheral (visceral) signalling. In contrast, people with IBS have clear bowel symptoms, although severe IBS has significant overlaps with FAPS.

1. Rome III criteria defining functional abdominal pain syndrome and irritable bowel syndrome

Functional abdominal pain syndrome

Diagnostic criteria* must include all of the following:

- continuous or nearly continuous abdominal pain
- no or only occasional relationship of pain with physiological events (e.g. eating, defaecation, menses)
- some loss of daily functioning
- the pain is not feigned (e.g. malingering)
- insufficient symptoms to meet criteria for another functional gastrointestinal disorder that would explain the pain

Irritable bowel syndrome

Diagnostic criteria: recurrent abdominal pain† or discomfort‡ at least three days per month in the past three months associated with two or more of the following:

- improvement with defaecation
- onset associated with a change in frequency of stool
- onset associated with a change in form (appearance) of stool

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

† Criterion fulfilled for the past three months with symptom onset at least six months before diagnosis.

‡ Discomfort means an uncomfortable sensation not described as pain.

FAPS is uncommon, with a prevalence of probably less than 1% although there are no specific Australian studies. This prevalence is comparable to severe disabling IBS, whereas milder IBS is very common. FAPS has a 3:2 female to male ratio. Importantly, both FAPS and severe IBS result in high costs due to patient disability, multiple consultations, hospital presentations, repeated investigations and unnecessary surgery.

Pathogenesis

There are few studies specific to FAPS and much of our understanding arises from studies in people with severe IBS and other functional disorders. Pain in functional gastrointestinal disorders is due to:

- amplification of visceral (peripheral) signals
- decreased inhibitory modulation of pain by the central descending pathways
- central amplification of pain perception (Figure 1).

However, in FAPS the central mechanisms, affected by cognitive and emotional inputs, greatly exceed the peripheral signals. Similar to severe IBS, patients with FAPS have a significant chronic history of psychological comorbidities, including emotional deprivation, major life stresses, physical and sexual abuse, poor social support and maladaptive coping skills. Primary and consequent anxiety, depression and somatisation are common.

Nonetheless, it is important to discuss disease pathogenesis with the patient in terms of a biopsychosocial construct in which genetic, environmental (dietary, bacteriological), physiological (motility, hormones) and psychosocial (stress, coping skills, psychiatric

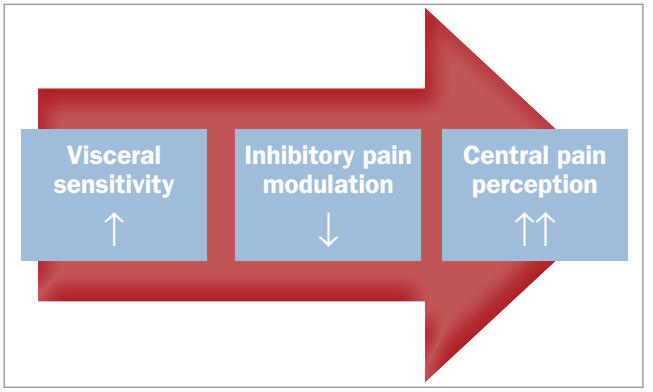

Figure 1. Mechanism of increasing pain in functional gastrointestinal diseases.

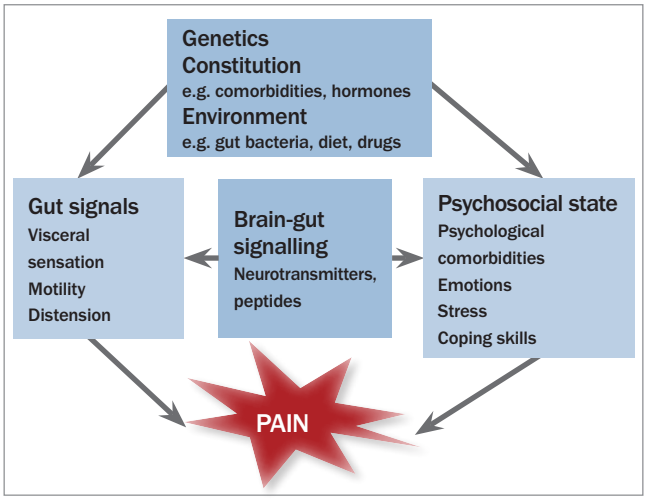

Figure 2. Biopsychosocial model of pain.

comorbidities) factors interact and contribute to pain perception (Figure 2). Thus, psychological and physical mechanisms are inseparable.

Approach to management

The mainstay of management of FAPS is to establish an effective doctor–patient relationship whereby patients feel that they get a fair hearing, they are being taken seriously, their symptoms are believed, they remain dignified and the doctor is genuinely trying to assist them (see Box 2). These patients have a history of attending multiple doctors, having repeated investigations (usually normal), having a sense that no one knows what is going on, treatment failures, and frustration and anger at previous medical encounters. Unfortunately, a major problem remains the inadequate consultative remuneration for such patients who frequently require long sessions.

Initial assessment

It is important to obtain a careful and thorough history from patients presenting with abdominal pain. Showing a willingness to work with these patients can often defuse their anger and defensiveness. Symptoms and disability should be clarified. Unless there is suspicion of malingering (which is rare), all symptoms should be considered as real and valid; symptoms should not be trivialised. Questioning about stress or emotional factors can be difficult without appearing judgemental and the patient should be left to decide if these factors compound symptoms. The patient should be examined carefully, noting his or her presentation and affect. Areas of abdominal tenderness should be noted and soft tissue or musculoskeletal pain excluded. Reasonable differential diagnoses should be considered, although the major differential diagnosis is severe IBS. Ulcers, reflux, biliary disease, chronic pancreatitis, coeliac disease, inflammatory bowel disease and cancer rarely present as such and will have been excluded by extensive investigations.

Explaining the diagnosis

The diagnosis of FAPS should be made on the basis of positive features and this should be stated clearly to the patient: '*You have an uncommon disabling condition called functional abdominal pain syndrome. Other diseases can resemble elements of functional abdominal pain syndrome but the tests to date have excluded those diseases*'. It should be explained to the patient that FAPS is a clearly defined entity and not a diagnosis of exclusion and that no rare, elusive disease has been missed. Repeating investigations is not recommended.

A basic pathophysiological explanation of the pain should be provided to the patient, worded in an understandable, plausible and nonjudgemental way: 'Functional abdominal pain syndrome occurs when pain signals are wrongly magnified to a severe level'. This is a difficult component of the consultation, especially as the mechanisms are complex and often beyond lay conceptualisation. The multifactorial, biopsychosocial concept of pain can be introduced. Many patients remain defensive and sceptical and so consistent reassurance is essential: '*The pain is real, it is not imagined, you are not putting it on, and it is not caused by an undiagnosed cancer*'. It may help to use analogies with other painful diseases in which tests are negative, for example, migraine and postamputation phantom pains. A cautious approach should be employed when discussing psychosocial factors as part of the aetiology: '*Stress, emotions, sleep disturbances, past experiences can all contribute to the abnormal pain signalling in the brain. This works unconsciously and you cannot control it*'. A neutral approach may be to suggest the vicious cycle of pain: '*Pain causes a lot of distress, helplessness and sometimes depression, and these act in a vicious cycle to make the pain worse*'. To reduce the perception that it is all in their head, it may help to add that other uncontrollable factors (e.g. genetic and hormonal factors) are also at play.

Once fears of sinister causes are allayed, patients become focused on treatment, often expecting an immediate solution as proof of your mechanistic theory. From the outset, it is necessary to declare that a cure is unlikely; most treatments only reduce symptoms to a more tolerable level. Patients must be braced to have realistic expectations and to expect slow gains. It may help to explain to patients the limits of our technology: '*Unfortunately, we currently cannot cure it. It has taken years to develop and it is likely to take a long time to make small improvements. For now, we need to work together to try different options*'. They must understand that there are symptom fluctuations: '*There'll be good days and bad days, but if overall we can take some edge off the pain, it may help you get by. It's a long process but we will keep trying to help you manage the problem*'. Ultimately, patient's

perceptions have to change from passively awaiting your solution to one of proactive self-empowerment: '*Think about what else may help, we're happy to help you try any suggestions*'.

Simple measures

General healthy measures, including advice on diet, exercise, weight, cigarette smoking, alcohol, drugs and sleep, should be emphasised. Simple measures that are effective in some patients include gentle abdominal massage and warm packs. Exercises such as stretching and walking should be suggested to patients and relaxation such as controlled breathing and meditation encouraged. Distraction with television, music, reading and other recreation can help.

Patients should be encouraged not to let the condition cripple them: *'It's difficult, but try to work through the pain'*. Alternative practitioners frequently recommend slippery elm and aloe vera juice and patient engagement is usually enhanced if you are open-minded to them: *'Use them if you find them helpful'*.

Medications

There are few studies on neurotropic drugs specifically addressing FAPS and many recommendations are made on the basis of overlaps with severe IBS and other pain disorders. Furthermore, all medications discussed below are used 'off label', that is, without specific Therapeutic Goods Administration approval for FAPS. It should be made clear to patients that you are prescribing the drugs to modulate pain, not to treat depression, because patients often think you are secretly treating psychological illness. Tricyclic antidepressants (amitriptyline, imipramine, nortriptyline) are usually recommended as first-line therapies. A low dose (e.g. 5 mg of amitriptyline at night) should be started with and then increased to 10 mg, 25 mg, 50 mg then 100 mg as tolerated, with at least a month between each dose increase. Patients should be warned that the benefits take weeks, and dose increases must be slow. Dry mouth and sleepiness are the most common side effects. Even if no benefit is perceived, it is worth encouraging persistence at the highest tolerated dose.

If tricyclic antidepressants are not tolerated, serotonin and noradrenaline reuptake inhibitors (SNRIs; e.g. venlafaxine and duloxetine) should be used at low doses and slowly increased to levels used for a psychiatric disease, again over weeks. In contrast, selective serotonin reuptake inhibitors (SSRIs; e.g. fluoxetine and sertraline) should only be considered if the intention is to also manage psychiatric symptoms such as anxiety and depression. More specialised options include augmentation of low-dose tricyclic antidepressants in combination with an SNRI. Anticonvulsant-based neuromodulators (gabapentin and pregabalin) should be reserved for patients not responding to tricyclic antidepressants and SNRI. For example, pregabalin should be started at 75 mg twice daily, increasing at two to four weekly intervals as needed, eventually to a maximum dose of 300 mg twice daily.

Specialist referrals

Gastroenterologists are important to confirm the diagnosis of FAPS. However, their willingness to continue care is variable. Pain management services are often required for the most refractory cases and offer substantial expertise with neuropharmacological agents.

2. Management approaches and treatment plan for functional abdominal pain syndrome

Management approach

- Establish an effective doctor–patient relationship
- Be nonjudgemental, thorough and thoughtful
- Acknowledge symptoms and disability, do not trivialise
- State diagnosis as 'functional abdominal pain syndrome', not a disease of exclusion
- Explain pathophysiological basis using a biopsychosocial model of pain
- Reassure that sinister causes have been excluded and that repeated investigations are unnecessary
- Set realistic expectations – symptom relief and not abolition, slow process
- Assure patients of ongoing review and support, even if other specialists are needed

Treatment plan

- Provide pain relief to increase function and reduce disability is the goal
- Provide support to increase patient insight, self-determination and control
- Encourage simple measures and healthy behaviour
- Prescribe specific pharmacotherapy (e.g. tricyclic antidepressants, serotonin and noradrenaline reuptake inhibitors)
- Consider referral of the patient to a pain management specialist
- Consider psychiatric and psychological review

Local expertise may also include regulated use of benzodiazepines and narcotics, which are normally contraindicated. Some institutions offer comprehensive pain management programs to encourage self-help and coping. For receptive patients, psychiatric review may help. Psychological approaches, including cognitive behavioural therapy to identify maladaptive thoughts and behaviours, may increase insight and self-control. Hypnotherapy and stress management approaches have also been used with benefits. However, even for patients willing to engage, access to psychological services remains difficult. Importantly, specialist reviews do not supplant the need for ongoing support from primary practitioners.

Summary

FAPS is an uncommon, severe functional condition that poses substantial management difficulties even once the diagnosis is secure. Although psychosocial factors are almost always involved, patient anger, scepticism and denial necessitates skillful clinical management to attain an effective doctor–patient relationship. Improving patient insight, self-control and coping skills, complemented by use of neuromodulators, are the best means to facilitate symptom tolerance and reduce disability in affected patients. **PMT**

Further reading

A list of further reading is included in the website version (www.medicinetoday.com.au) of this article.

COMPETING INTERESTS: None.

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Further reading

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