

# The Gut and the Psyche

The content of this guest editorial is the substance of an address given to the Gauteng Branch of the SA Society of Psychiatrists in late 2006. It is less a formal dissertation than the musings of a rude mechanical who by force of circumstance found himself in the murkier reaches of the mind<sup>1</sup>, dragged there by patients with functional problems.<sup>2</sup>

The term 'functional bowel disorders' includes a range of symptom complexes, from the mouth – or at least pharynx (globus-now-no-longer-hystericus) to the anus (proctalgia fugax), but the focus will be only on the two most common and familiar: irritable bowel syndrome (IBS), and idiopathic slow transit constipation.

In general, functional disorders are defined as characteristic and consistent symptom complexes, in the absence of demonstrable histological changes. This does not mean, however, that there are not clear physiological changes: abnormalities of motility, compliance, sensory thresholds, manometry, or electrophysiology. For those who concentrate on the central nervous system, it is worth remembering that the enteric nervous system has at least as many neurones as the spinal cord (100 million), so it is hardly surprising that its malfunctions make themselves known.

In terms of definition, the Manning criteria<sup>3</sup> held sway for many years; more recently they have been replaced by the not-so-terribly-different Rome II criteria. For IBS, these include abdominal pain for more than three months during the last twelve, with altered bowel habit (diarrhoea, constipation, or alternating diarrhoea and constipation), in association with one or more of the 'minor' criteria of bloating, pain relieved by defaecation, rectal dissatisfaction ('incomplete evacuation'), and passage of mucus. 'Red flags' are important, to avoid missing organic disease: age of onset after 35; a family history of bowel cancer; any passage of blood; weight loss; poor general health; and anaemia. If these are negative, the only investigations needed are a sigmoidoscopy, haemoglobin and C-reactive protein, perhaps with faecal occult blood. Colonoscopy and/or barium enema should not be routine.

One of the recurring traps with functional disorders is a habit we were all taught early in medical school: to assign symptoms to the organs from which they appear to originate. Thus in constipation (with its infrequent motions, small hard stools, and straining), total colectomy (to remove the apparently causative organ) can worsen the symptoms if there has not been rigorous patient selection.<sup>4</sup> The history of surgical involvement with functional disorders is littered with disasters, where mechanical solutions were proposed to fix what were very convincingly demonstrated (usually radiological) abnormalities.<sup>5</sup>

This uncertainty over the origin of the symptoms is compounded by the fact that the large bowel is an emotionally blunted organ – it has a very limited number of ways to indicate its unhappiness. Thus cancer, quiescent ulcerative colitis, spastic colon, constipation, food intolerances, post-

dysenteric syndrome and diverticulosis can all have identical symptoms (which partly accounts for the sheer terror that drives the investigatomania so many patients with functional symptoms fall prey to).

## Irritable bowel syndrome

IBS is by far the most common diagnosis in any GIT clinic, and can comprise up to 40% of visits. My own approach to the condition is a combination of liberation and empowerment – changing the patients from passive victims to people in charge of what is happening to them, even though we cannot offer any lasting cure.

### **Once the diagnosis has been made (and it is a positive diagnosis, not a diagnosis of exclusion), we would:**

- identify the condition ('give her the diagnosis')
- affirm that the condition is real, not imaginary or 'in your head'
- assure her that she is not mad (many assume this, since every doctor insists that there is nothing wrong, while they know that there is)
- eliminate the term 'psychosomatic', which is not particularly helpful to anyone, least of all the person suffering the symptoms. All of us are familiar with the psychosomatic tachycardia outside a viva voce room; labelling it as such adds nothing to our understanding, and does not make the situation any easier to cope with<sup>6</sup>
- emphasize that the condition is not cancer, and will not turn into cancer (a surprising number of healthy twenty-year olds are convinced that they are dying of cancer and that their doctors are hiding it from them)
- point out that there is no cure (most cases seem to burn out by about 60, but that is little consolation to a 20-year old, for whom it is three lifetimes away)
- dissuade them from seeking a solution in chemistry, since (pharmacologically speaking) nothing works. Having said that, however, tergasero (a 5-HT<sub>4</sub> agonist) can be useful in constipation-predominant IBS, and loperamide and mebeverine are often helpful in the diarrhoea-predominant form<sup>7</sup>
- caution against fad diets, since diet (with rare exceptions) is not the cause. Fibre supplementation often worsens symptoms<sup>8</sup>, but formal dietetic assessment can be helpful to identify the occasional cases of specific intolerances
- warn that the course is fluctuant; it will improve (which does not mean that it is going away) and will get worse (but equally, it will not keep on getting worse).

This clearly all takes some time, so the initial consultation is lengthy. But the extraordinary thing is that patients are genuinely liberated, and placed in control, and very few need to return. Hardly surprisingly, it has been shown in a number of papers that the main determinant of successful outcome is the quality of the therapeutic doctor-patient relationship<sup>9</sup>; as

was pointed out at a plenary session of the American Gastroenterological Association on the placebo effect, "any doctor without a placebo effect on his patient should become a pathologist".

**A number of issues remain unresolved, among the following:**

- a. The difference between patients who have been labelled 'irritable bowel syndrome' and those with symptoms identical in character and severity (the 'non-complainers') who have never consulted a gastroenterologist, because they interpret their symptoms as not requiring medical intervention.
- b. The significance of the clear association of psychiatric disorders such as anxiety, neuroticism, somatization, catastrophizing, with functional disorders. Numerous studies support an association, though not a causative one; nevertheless there is often benefit from anti-depressant (especially tricyclic) therapy. Curiously, some of the benefit may be the result of an unintentional anticholinergic modulation of rectal function by these drugs.
- c. Epistemological issues – how do we know that something (in this case, a symptom-complex which we have identified as a discrete phenomenon, IBS) exists?<sup>10</sup> This is related to the way in which taxonomy drives perception – we see things according to the labels or patterns we impose on phenomena. Psychiatrists seem to be particularly bad with this (vide the various incarnations of DSM), but in their defence it is a pretty basic human activity – the first thing that Adam did in the Garden of Eden was to name the animals.<sup>11</sup>
- d. The danger of reductionism in attempting to understand these conditions. Two quotations from Drossman (vid. inf.) are of relevance, and will resonate with psychiatrists, whom, I suspect, are more familiar with the complexities of reality than most:

"implicit in these statements is an assumption that the knowledge of the basic mechanisms underlying neuro-enteric reactivity or symptom generation is all that is needed to understand our patients with functional GI disorders"

"while biomedical investigation is of great value in explaining the basic mechanisms of disease, it is not a practical means to understand human illness" (emphases mine)

- e. The place of primarily psychiatric therapies. NW Read was led to the mind through his work as a digestive physiologist, and practises 'gut-directed group psychotherapy', while Whorwell popularised self-hypnosis, including ego-strengthening and gut-directed therapy. These two workers are probably unique, in that they are both doubly qualified (psychiatry and gastroenterology); but no one else has been able to get similar programmes going with any sort of conviction.

**Constipation**

Constipation is an entirely different problem. Obviously, the common causes must be excluded: poor diet, lack of exercise or immobility, drugs (just about everything that psychiatrists or physicians use), metabolic (hypercalcaemia), endocrine

(myxoedema), neurological (stroke, dementia, paraplegia, multiple sclerosis), faecal impaction, and the rare megacolon (Hirschsprung's disease, hollow visceral myopathy). The vast majority of cases are easily accounted for, but there is a residue, almost invariably young adult women, who do not fit these categories. Typically, their bowel habit was normal in childhood, but now they move their bowels unaided once a month or less. They are notorious attendees in GIT clinics, draped around the necks of despairing gastroenterologists like cold dead albatrosses. Nothing works: diet, stimulant laxatives, bulking agents, prokinetics and even surgery are all alike fruitless.<sup>12</sup>

A few years ago, a particularly interesting experiment was carried out on healthy young English medical students. Colonic transit was measured, and then they were given one simple instruction: suppress the call to stool. Within a week, all their colons had become essentially inert – transit (normally driven from proximal to distal by the autonomic and intrinsic enteric nervous systems) had been inhibited retrogradely by inhibition of somatic (pelvic floor) innervation. I believe that this study gives a clue to both the mechanism and the cure of severe idiopathic constipation.

Treatment involves modifying diet (if only to provide the rectum with something to expel) and encouraging moderate exercise (40-60 minutes a day at no more than 50% of VO<sub>2</sub> max; walking, running or cycling are all fine).<sup>13</sup> An attempt is made to retrain bowel habit (what most of us learnt before the age of two, and then simply took for granted)<sup>14</sup>, by encouraging them to answer every call to stool<sup>15</sup>, spending no more than two minutes in the loo<sup>16</sup>, and squatting (by placing a tomato box beneath the feet; this straightens out the ano-rectal angle).<sup>17</sup>

The mainstay, however, is biofeedback. Many of these patients have incoordination of the pelvic floor.<sup>18</sup> On straining, instead of relaxing the sphincters, they snap shut in what I call the Chubb Safe Sign.<sup>19</sup> This contraction is entirely unconscious; biofeedback involves little more than teaching the patients the feeling of relaxation, and pointing out when they contract inappropriately. Fortunately, nobody can keep her (or his) external sphincter actively contracted for more than a minute; invariably, the muscle relaxes, and one then advises the patient that that feeling of relaxation is what they must aim for. In difficult cases, locally applied nitric oxide donors are prescribed to relax the internal sphincter<sup>20</sup>, to assist awareness of the feeling of letting go. Other procedures involve reducing rectal sensory threshold levels, by inflating balloons in the rectum with air until it is felt, and then re-inflating at successively smaller volumes. Patients come once a week for a ten-minute session, for five or six weeks. From once a month or less, most of our cases have attained a spontaneous motion daily or every second day on this regimen.

As far as aetiology goes, two names are pre-eminent: Douglas Drossman (an American gastroenterologist) and Alexis Brook (an English psychoanalyst). Drossman identified two characteristics of these women: physical and/or sexual abuse; and childhood bereavement (death, divorce, separation). Brook took the analysis further, describing failure of gender-specific fulfilment: something had gone wrong in the way these women perceived themselves as women. This included catastrophes like abuse, rape and incest; but also

'normal' events such as pregnancy, infertility, abortion, miscarriage, marriage, divorce, not getting married, and so on. Interestingly, psychiatric or psychological treatment of the precipitating cause (which may often be necessary) has no effect on the constipation; it is almost as if the bowel disorder has taken on a life of its own.

There is no doubt that unreported physical and sexual violence against women is far higher than most clinicians realize; but case-control and population studies have indicated that abuse is many times more frequent in constipated women.

My own suspicion about the mechanism is that so much of gender is anatomically located in the lower trunk that these women simply deny that part of their bodies, excluding it from consciousness. There is then retrograde inhibition of colonic function, inexorably leading to constipation.<sup>21</sup> This is perhaps the classic medical example of the bowsprit getting mixed with the rudder.<sup>22</sup>

In conclusion, no one can really argue that IBS or constipated patients should be transferred from 'organic' clinics to 'psychological' care; that would merely replace one monolithic model with another, equally deficient. In addition, it is entirely unfair of 'physical doctors' to expect psychiatrists to take these difficult patients off their hands. Psychiatrists do not have the training to exclude organic problems; nor does that exclusion make the condition 'psychiatric'. What will help, though, is greater cooperation between the disciplines – many of these patients have psychological problems that are way beyond any surgeon's bed-side manner, and, famously, 'in functional bowel disorders one needs to use the sigmoidoscope at least as much as the sigmoidoscope'.<sup>23</sup>

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### Endnotes

1. Other people's, rather than his own.
2. "A good reliable set of bowels is worth more to a man than any quantity of brains" (Josh Billings)
3. Devised in KW Heaton's unit at the Bristol Royal Infirmary.
4. In the Wits colorectal unit, only two colectomies have been performed for constipation in the last 15 years.
5. "The track record of most surgical procedures for disorders having a physiological abnormality but with exaggerated psychiatric overtones is a dismal one of failed surgical endeavour." (MRB Keighley)
6. Particularly when the specialist superciliously adds the deadly epithet 'merely'.
7. WG Thompson, the doyen of thinkers on functional gut disorders, said of pharmacotherapy for functional complaints that it is "a bull market on bare information".
8. Notwithstanding Sir William Arbuthnot Lane's famous dictum, "The whiter your bread, the sooner you're dead", and pace Denis Burkitt; but that's what EBM does.
9. In a wonderfully-titled paper 'Doctor-dependent changes in complaint-related cognitions and anxieties during medical consultations in functional abdominal complaints' it was concluded that talking to your patients was a good idea ("clear explanation by the gastroenterologist may reduce health anxiety and subsequent clinic attendance"). (Psychol Med, 1995)
10. Cf. The first of Kant's four great questions: Was kann ich wissen?
11. Genesis 219,20 for those who wish to check.
12. It was possibly about these patients that the following limerick was composed:  
There was a young girl of East Anglia  
Whose loins were a tangle of ganglia.  
Her mind was a webbing  
Of Freud and Kraft-Ebbing  
And all sorts of other new-fanglia.
13. Gut (1991); 32:941-944
14. Conversation in Helen Joseph Proctology Clinic, between author and 50-year old divorcee whose constipation started after her (recent) divorce:  
Q: Just what does this 'biofeedback' involve?  
A: I am going to teach you to poo again.  
Q: What, at my age?
15. "Op jou roepstem sal ek antwoord." There is no equivalent phrase in our new national anthem.
16. On the basis that if the owner takes her bowels seriously, the colon must cooperate in turn.
17. Squatting is undoubtedly the physiological position for defaecation, partly because it opens up the ano-rectal angle. I used to advise patients to remove their shoes, lift up the toilet seat, and squat on the edge of the bowl, but got such odd looks that I have abandoned that approach.
18. For a long time it was thought that there were two types of idiopathic constipation: outlet obstruction, and colonic inertia. But identifying the difference does not alter the management, since they both respond to biofeedback. The apparent demonstration of differences may not have separated distinct phenomena.
19. More conventionally known as 'paradoxical puborectalis contraction'.
20. One tablet (0,5mg) of Angised®, crushed in a specimen bottle, and mixed with 5ml K-Y jelly; apply prior to evacuation; make up fresh daily.
21. This is an entirely untested hypothesis, but it makes sense to me. (That must count as about Level 6 in terms of Evidence Based Medicine.)
22. First noted by Lewis Carroll:
23. Then the bowsprit got mixed with the rudder sometimes:  
A thing, as the Bellman remarked,  
That frequently happens in tropical climes,  
When a vessel is, so to speak, 'snarked'.
23. Michael Kamm, physician to St Mark's Hospital, London.