A PATHOPHYSIOLOGICAL APPROACH TO THE MANAGEMENT OF IRRITABLE BOWEL SYNDROME

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As the understanding of both the clinical manifestations and pathophysiological mechanisms of irritable bowel syndrome (IBS) begins to widen, a more logical approach to treatment can be adopted replacing the rather empirical methods of the past.

A positive approach to diagnosis is preferable to the old technique of diagnosis by exclusion. It is of course essential to exclude other possible problems where applicable but emphasis should be placed on patients fulfilling certain diagnostic criteria. The three cardinal symptoms of IBS are abdominal pain (any site), abdominal distension and some abnormality of bowel function. The latter encompasses frequent defecation, constipation, diarrhoea and alternating stool forms. Straining and difficulty with defecation irrespective of stool form or number of bowel openings per day should also be regarded as an abnormality of bowel habit. A feeling of incomplete evacuation of the bowels, the passage of clear mucus and pain relief by defecation are also good pointers to the diagnosis [1].

In 1985 we demonstrated that a large number of 'non-colonic' manifestations are associated with IBS [2]. These are enumerated below:

Gastrointestinal	*Genitourinary*	*Others*
nausea	dyspareunia	lethargy
heartburn	frequency	backache
early satiety	nocturia	thigh pain
excess wind	urgency	
	urge incontinence	

These are of considerable interest for several reasons. Firstly, they can lead to inappropriate referral and investigation sometimes resulting in unnecessary interventions such as surgery. Secondly, patients are often alarmed by the presence of a wide variety of disparate symptoms fearing more serious disease. Recognition of this aspect allows the medical practitioner to reassure on this point and this may

help to keep unnecessary investigation to a minimum. Thirdly, we have recently shown that patients may actually perceive the 'non-colonic' features as more intrusive than the bowel complaints themselves [3], which is obviously important in its own right but also suggests these symptoms may also have diagnostic value. This possibility has been assessed and confirmed by comparing the prevalence of these features in IBS and other gastrointestinal disorders [4]. Lethargy, backache, early satiety, excess wind, urinary frequency and a sensation of incomplete evacuation of the bladder or rectum proved to have particular diagnostic potential and should help in our efforts to encourage the positive approach to diagnosing IBS.

The prominence of genitourinary symptoms in females with IBS raises the possibility of confusion between IBS and gynaecological problems and we have recently been assessing this issue in more detail. Many women with IBS find that sexual intercourse often leads to an exacerbation of their symptoms [5]. They usually experience more pain the next day and on closer questioning the pain is more reminiscent of their gut pain rather than being a true dyspareunia. We have also shown that many women attending gynaecological clinics with lower abdominal pain have symptoms very suggestive of IBS [6]. In addition, these women have a much poorer outcome than those without IBS, presumably because they did not actually have anything gynaecologically wrong with them in the first place [7]. We have also looked at possible features that may help to distinguish IBS from gynaecological disorders in women presenting with lower abdominal pain [8]. The presence of coexistent bowel symptoms makes a gynaecological cause much less likely whereas the presence of gynaecological symptoms is not necessarily indicative of gynaecological pathology.

The multiplicity of symptoms in IBS suggests it may be a more diffuse disorder than previously recognized and in particular not necessarily confined to the colon. Assessment of gastrointestinal motility in patients with IBS has shown evidence of abnormalities in the oesophagus [9], small bowel [10–13] and large bowel [14–16]. In addition, abnormalities of bladder function have been demonstrated [17] suggesting that if there is a disorder of smooth muscle in patients with IBS it may not be confined to that of the gastrointestinal tract. There is also evidence that patients with IBS have changes in visceral sensitivity independent of their somatic perception of pain [18–20]. It is interesting to speculate whether a heightened perception of visceral sensation is due to abnormal sensing or abnormal input. In other words are normal events being sensed abnormally or are abnormal events being sensed normally?

It is likely that IBS is composed of subgroups with different physiological characteristics. Interpreting physiological data is going to be very difficult as long as we continue to study only small numbers of ill-defined patients which may not even include representative samples of particular subgroups. Traditionally patients are often subgrouped according to bowel habit type but this may be an entirely inappropriate division although more useful ways of categorizing patients have yet to be defined. It may be that the best way to subdivide patients is by studying large numbers of unselected subjects and assessing whether certain physiological patterns emerge.

Until we have better physiological parameters to guide us, specific targeting of therapy is difficult although some trends are beginning to emerge. For instance, if a

motility trace exhibits excessive contractility then the use of antispasmodics would seem logical. If a lack of propulsive activity is demonstrated a prokinetic agent could be useful. Conversely if short migrating motor complex cycles [12] are found a drug such as loperamide may help. It is thought that 5-hydroxytryptamine (5-HT) receptors may be important in the perception of visceral pain. Now that more specific antagonists are becoming available it is possible that such agents may have a role in those patients in whom visceral hypersensitivity may be a problem.

The psychological aspects of IBS have always been the subject of controversy but recent information has helped to clarify the issue. Approximately 50–60% of patients with IBS attending hospital outpatient departments have evidence of psychopathology [21] but that does not answer the question of cause and effect. Recent studies of patients with IBS in the community not seeking health care do not reveal an excessive prevalence of psychopathology [22, 23]. This suggests that the psychopathology may bring the patient to the attention of the doctor rather than primarily being implicated in the causation of the problem in the first place.

By taking account of the appraisal of IBS outlined above it should be possible to manage a substantial proportion of patients effectively. The positive approach to diagnosis should also be conveyed to the patient emphasizing that they do have a legitimate disorder rather than there being 'nothing' wrong with them. Similarly the reassurance about the absence of more serious disease should not be conveyed in terms of there being 'nothing' wrong but rather that malignancy etc., has been excluded. As previously stated patients are often severely troubled by the 'non-colonic' features of their disorder. These seem to settle to some degree if the primary disorder improves but even if they do not, patients appear to be able to cope better if they understand that all their symptoms are part of the same disorder.

Patients are nearly always advised to increase the amount of fibre in their diet. This may help some constipated subjects but it should be remembered that many people with IBS find that roughage, particularly that derived from bran, makes them worse. Antispasmodics are mainly useful for the pain of IBS and it is certainly worth trying several to ascertain which is the most effective for a particular individual. With these drugs 'as necessary' usage is better than regular dosing. In patients with a loose bowel habit antidiarrhoeal medications can be valuable especially when urgency or even incontinence is troublesome. The psychological problems associated with IBS often diminish with just a sympathetic approach, and specific medication for this aspect should be reserved for those patients with more severe psychopathology.

Approximately 75% of patients with IBS respond to the approach to management outlined above but the remainder pose a more difficult problem. Dietary exclusion, psychotherapy and hypnotherapy have been suggested as possible options for these patients. The response rate to exclusion diets varies from 10 to 66% depending on the study [24–27] but undoubtedly some patients show a dramatic response to this approach. Psychotherapy also appears to have a beneficial effect [28, 29] and is worth considering. We have been looking at the effect of hypnotherapy for several years and find that approximately 80% of refractory patients respond well to this form of treatment [30–32]. How hypnotherapy might lead to improvement is of considerable interest. It undoubtedly has a

psychological effect but we have recently shown that rectal sensitivity can be positively modified during hypnosis. Thus patients with a hypersensitive rectal mucosa can make it less sensitive and those with an insensitive rectum seem to be able to make it more sensitive [33]. This apparent ability to modify a physiological parameter has obvious implications for the therapy of other conditions.

The limited availability of psychotherapy and hypnotherapy makes them a realistic option for only a relatively small number of severely affected patients. Newer medications are in the developmental stage and hold out some promise for the future treatment of these people as well as milder cases of IBS. In particular, selective anticholinergics are currently being evaluated and the cholecystokinin inhibitors are a particularly interesting and promising group of drugs. Undoubtedly as the physiology of IBS is better understood more rational approaches to therapy can then be developed.

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