

IBS - Know your Patient, Understand the Illness

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What is Irritable Bowel Syndrome (IBS)? Is it a single condition awaiting the discovery of a cause or a conglomerate of different disease mechanisms? Is it the visceral expression of unresolved emotional torment? Is it the inevitable outcome of our modern disordered diet and lifestyle. Is it a genetic complaint, an undiscovered infection, an unsuspected allergy, a neuromuscular disorder of the gut, a brain gut disorder, an auto-immune disease? Does Irritable Bowel Syndrome exist at all? After 40 years, since the term was coined, are we any nearer to finding definitive answers to the nature and cause(s) of IBS?

What is Irritable Bowel Syndrome?

IBS is still an enigma. It has no pathology, no obvious cause and no definitive treatment. It is a medically unexplained illness like Chronic Fatigue Syndrome, Functional Dyspepsia, Fibromyalgia Syndrome, Non-cardiac chest pain or Irritable Bladder, and it overlaps with all of these. IBS is an illness defined by committee; the Rome Committee, who met in the eternal city on many occasions over the last 20 years to agree and refine diagnostic criteria.

Accordingly, IBS is now recognised as a chronic abdominal complaint consisting of frequent episodes of unexplained abdominal discomfort (bloating or pain) and bowel upset, which might be diarrhoea and/or constipation^{1,2}. Of course such symptoms are not specific to IBS and may be caused by conditions that have a definitive pathology, such as Ulcerative Colitis, Crohn's Disease, Coeliac Disease, and cancers of the bowel or ovary. Therefore, in order to establish a diagnosis of IBS, the doctor needs to be able to be sure that the patient does not have any treatable organic complaint. Fortunately, there are now simple tests (faecal calprotectin, tissue transglutaminase, faecal occult blood and CA 125) that enable samples to be taken in local surgeries and clinics to screen for the most common and serious organic diseases³. So we might be forgiven for regarding IBS as a diagnosis of exclusion. The situation is complicated by the fact that people diagnosed with IBS tend to have a range of symptoms that do not appear to come from the bowel. Headache, backache, breathlessness, chest pain, faintness, tiredness, bladder frequency, nausea, indigestion, itching, muscle pain

are all common in people with IBS. Indeed the range of symptoms, their context and associations are so variable that IBS may be regarded as a disease of the individual with its own idiosyncratic fingerprint.

This doesn't mean to say that IBS doesn't exist. Chronic unexplained bowel symptoms cause people considerable discomfort and disability. And Irritable Bowel Syndrome is as good a name as any. In the past, descriptions of IBS featured in overarching diagnoses, such as hysteria, melancholia, hypochondriasis, the spleen, neurasthenia and irritable weakness. Then physicians recognised that unexplained illnesses often reflected the bodily expression of what had happened and incorporated psychological and emotional symptoms. The scientific discoveries of the last century led to an increased specialisation and 'medicalisation' so such terms fell into disuse and were replaced by diagnoses that were organ specific. But an illness (like a rose) by another name is still the same illness.

The Sensitive Gut

Do we get any clues from the physiology? Perhaps the most consistent physiological finding has been an increase in visceral sensitivity or irritability, which is often thought to be related to stress and or infection. A sensitive gut, like a sensitive skin, will react excessively to anything that stimulates it, which in the case of the gut will be certain components of the diet and emotional upset or to put it simply, 'food and mood'. A true food allergy is rare in IBS, but nearly everybody with this condition is intolerant often to a range of foods. But



equally, they are intolerant of stress. So emotional tension of any kind; anger, anxiety, fear, torment, envy, grievance, guilt may wrench the gut out of kilter. So will foods that cause the colon to contract, such as fatty meals, coffee and hot spicy dishes, as well as foods that distend the gut; gassy fruits and vegetables that contain fermentable sugars (FODMAPS)⁴ that are incompletely absorbed in the small intestine and sources of vegetable and cereal fibre. So we might conclude that it is not so much the fault of the specific food, but more the effect of a sensitive gut.

This begs the question, what makes the gut more sensitive? The strongest candidates are stress and infection. Many patients report that their IBS commenced at a time of great stress, the death of a close family member, the breakdown of a relationship, or the loss of a job, for example. Sometimes the instigator may seem mundane, though it may carry enormous significance and meaning to the patient. Results of brain imaging highlight increased activity in the emotional centres of the brain and lend credence to the stress connection. The challenge to the therapist may be to bring the source and meaning of what happened back to mind where it can be dealt with instead of remaining as the incurable gut illness.

Several studies have shown that in about 10% of cases, an attack of gastroenteritis can be followed by IBS, which often takes the form of diarrhoea and pain and is associated with a mild infiltrate of inflammatory cells in the colonic epithelium. But gastroenteritis usually clears up with no long term problems. So why should the symptoms persist in some? Prospective research conducted over the last decade or so has shown that people who develop persistent bowel dysfunction were more likely to score highly for anxiety and depression at the time of their gastroenteritis and be suffering from stressful life situations⁵. It is as if the stress forged a link between the mind and the gut such that the symptoms were recruited to express the ongoing emotional torment.

Is there an infection?

The possibility of a specific infection in IBS continues to generate research interest, especially with the resurgence of probiotics and prebiotics and recent observations using poorly absorbed broad spectrum antibiotics⁶. But a specific pathogen has not been established for IBS and changes in colonic microflora may occur in response to alterations in bowel function and/or diet.

There are strong theoretical and experimental reasons why probiotics and prebiotics might restore gut stability in IBS, but clinical studies using probiotics and prebiotics have not accrued enough evidence to prove the case⁶. Suffice to say that some probiotics, especially *bifidobacterium* and *lactobacillus spp* may help some people with some symptoms some of the time. Recent observations on how some probiotics can affect emotional wellbeing, probably by generating transmitter substances might appear to square the circle of mind and gut.

Over the last few years, studies have shown that the poorly absorbed broad spectrum antibiotic, Rifamixin may reduce symptoms of bloating, pain and diarrhoea⁶. The authors claim that Rifamixin may abolish overgrowth of colonic bacteria that could ferment carbohydrate in the small intestine, but the evidence for small bowel overgrowth relies on an early rise of hydrogen on lactulose breath tests, which might equally well be explained by rapid transit to the colonic pool of bacteria. This raises the possibility that Rifamixin may act by suppressing the normal colonic microflora, which in turn might render the colon more susceptible to invasion by pathogenic species.

The most exciting development in colonic bacteriology in recent years is the use of advances in genetic technology to characterise the ecology of the colonic biomass. There are trillions of bacteria in the human colon and it is impossible to study each individual species. This major breakthrough offers the chance to define the whole ecosystem, rather like studying a wood rather than the individual trees or shrubs and then working out the factors that determine that particular ecology. So far scientists have discovered three major microbiomes in healthy individuals and these vary according to culture and geographical location. Who knows, within the next few years, scientists may establish particular microbiomes for IBS and derive ways to influence them. Just as gardeners know what makes good compost, so we may discover what makes a healthy colonic ecosystem. So it seems that the future's brown, not orange!

Other causes

What else is happening? Well some patients with constipation predominant IBS have hyperextensible joints indicative of Ehlers-Danlos Syndrome, a genetic disturbance in elastic tissue⁷. A few others have evidence of an intestinal myopathy or neuropathy. There is a resurgence in the concept of bile acid malabsorption as a cause of IBS diarrhoea. Coeliac Disease is more common in patients with IBS than previously appreciated⁸. And in those who do not have Coeliac Disease, the concept of gluten toxicity sensitivity is gaining credibility. Ovarian cancer can present with abdominal pain and bloating. All of these may strengthen the belief the constellation of bowel symptoms that we call IBS; chronic abdominal discomfort plus bowel disturbance that has no obvious cause, may in time turn out to have a number of treatable causes; genetic, emotional, microbiological, infective, dietary, hormonal, allergic, or we may have to invent a new terminology to apply some logic to the enigma.

Treatment

So are we any closer to an effective treatment? Without a definitive cause, we have to rely on treatment of the dominant symptoms. Antispasmodics and bowel regulators (laxatives and antimotility agents) still have their place and the appearance of new prokinetic agents such as prucalopride offers new and more effective options. NICE approves the use of a month's trial of probiotics². The reduction of dietary



fibre and foods containing fermentable sugars (FODMAPS) can reduce the strain on the sensitive bowel⁴. Low dose antidepressants are an effective means of improving symptoms and well being. Counselling, psychotherapy, hypnotherapy and other complementary therapies can help.

But IBS encompasses such a range of putative causes and possible solutions that it may best be considered an illness of the individual. To paraphrase Sir William Osler, it is much more important to understand the patient with the illness than the illness in the patient.

Self Care

With this in mind and the Government and specialist societies encouraging self care in the community⁹. The IBS Network, the national charity for IBS has developed its new web-based self care plan¹⁰. This resource, which was unveiled to its members and professional affiliates in March 2012, provides a comprehensive insight into the nature and causes of IBS and offers a range of options (dietary, lifestyle, medical and therapies), that patients may use in collaboration with their health care professionals to find the best way to manage their condition. The Self Care Plan incorporates The IBS Symptom tracker, by which patients can plot their trajectory of their condition and identify the factors that exacerbate or help.

References

1. Spiller R, Aziz Q, Creed F, Emmanuel A, Houghton L, Hungin P, et al. Guidelines on the irritable bowel syndrome: mechanisms and practical management. *Gut* 2007;**56**(12): 1770-98.
2. NICE. Irritable bowel syndrome in adults: Diagnosis and management of irritable bowel syndrome in primary care. London: National Collaborating Centre for Nursing and Supportive Care; National Institute of Clinical Excellence, London; 2008.
3. Otten, CMT Kok L Witten BJM et al. Diagnostic performance of rapid tests for faecal calprotectin and lactoferrin and their ability to discriminate inflammatory from irritable bowel syndrome. *Clin. Chem. Lab. Med* 2008, **46**: 1275-1280
4. H. M. Staudacher, K. Whelan, P. M. Irving, M. C. E. Lomer. Comparison of symptom response following advice for a diet low in fermentable carbohydrates (FODMAPs) versus standard dietary advice in patients with irritable bowel syndrome. *J Hum Nutr Diet*, 2011 **24**:487-495
5. Gwee, K A, Graham J.C. McKendrick, M.W. et al. The role of psychological and biological factors in post infective gut dysfunction. *Gut* **44**: 400-406.
6. Quigley EM. Therapies aimed at the gut microbiota and inflammation: antibiotics, prebiotics, probiotics, synbiotics, anti-inflammatory therapies. *Gastroenterol Clin North Am*. 2011;**40**(1):207-22.
7. Levy HP, Mayoral W, Collier K, Tio TL, Fracomo CA. Gastroesophageal reflux and irritable bowel syndrome in classical and hypermobile Ehlers Danlos syndrome (EDS). *Am J Hum Genet*. 1999;**65**:A69.
8. Ford AC, Chey WD, Talley NJ, Malhotra A, Spiegel BM, Moayyedi P. Yield of diagnostic tests for coeliac disease in individuals with symptoms suggestive of irritable bowel syndrome: systematic review and meta-analysis. *Arch Intern Med*. 2009 Apr 13;**169**(7):651-8.
9. Robinson A, Lee V, Kennedy A, et al. A randomised controlled trial of self-help interventions in patients with a primary care diagnosis of irritable bowel syndrome. *Gut* 2006;**55**(5):643-8.
10. Coulson NS. Receiving social support online: an analysis of a computer-mediated support group for individuals living with irritable bowel syndrome. *Cyberpsychol Behav* 2005;**8**(6):580-4



The IBS Network is the UK's national charity for IBS, offering patients the resources they require to manage their own condition. It has an interactive website (www.theibsnetwork.org) a telephone helpline staffed by specialist nurses, professional responses via email, a can't wait card, it publishes Relief, a monthly newsletter, Gut Reaction containing up to date articles and information and it has just introduced its comprehensive and interactive IBS Self Care Plan.

About the author

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Dr Nick Read (www.nickread.co.uk) is a writer, physician and psychotherapist, and works to help people cope with medically unexplained illnesses. He is also the medical adviser and chair of The IBS Network, the national charity for patients with Irritable Bowel Syndrome. Previously, Nick held chairs in Gastrointestinal Physiology, Human Nutrition and Integrated Medicine at Sheffield University and was director of the Gastrointestinal Research Unit. He has been an author of over 500 hundred original papers and articles and 11 academic books. Nick's popular monograph, 'Sick and Tired; healing the illnesses doctors cannot cure', was published in paperback by Phoenix in 2006.

