

The gender influence

“Bowel habit appears to vary during the course of the menstrual cycle”

There seems to be little doubt that in Western societies IBS appears to be more common in females than males. If this is the case, then it is reasonable to ask whether this is a function of the biology or sociology of being female, or some mixture of the two. Dr Peter Whorwell, a consultant physician at the University Hospital of South Manchester, considers the evidence.

It is well known that bowel function differs in men and women, with women tending to defecate less often and also exhibiting a less regular pattern of defecation. Furthermore, it is within the experience of most women that bowel habit appears to vary during the course of the menstrual cycle with loose bowels at the onset of menstruation being the most common complaint. There have also been reports of constipation being quite common before the onset of bleeding but this has not been such a consistent finding. Among a number of plausible explanations for these observations is the possibility that female sex hormones exert an effect on bowel function. This concept is lent credence by the fact that pregnant women often complain of symptoms such as heartburn and constipation which might have a motility disturbance as their basis although mechanical effects have also to be taken into consideration.

“Male hormones might protect the gut from insults rather than female hormones causing problems”

Hormonal influences

Attempts to relate physiological changes in gastrointestinal function to changes in circulating hormones, particularly during the normal menstrual cycle, have led to conflicting data. Many of the studies are now quite old and it may be that more meaningful results would emerge if they were repeated using the more sophisticated techniques now available. The evidence that some of the changes in gastrointestinal function during pregnancy are hormonally mediated is more convincing. Pregnant women have been shown to have reduced lower oesophageal sphincter pressures,¹ delayed small bowel transit² and slower rates of gall bladder emptying.³ It has been suggested that this ‘hypomotility’ is mediated by progesterone and there is animal evidence to support this view. However, whether the small fluxes in progesterone that occur during the normal menstrual cycle are sufficient to have a

clinically significant effect is less certain although it is possible to find studies reporting ‘hypomotility’ during the luteal phase of the cycle. It is very unlikely that the frequent observation of loose stools at the onset of menstruation is hormonally based. A much more plausible explanation for this phenomenon is the local release of prostaglandins or other inflammatory mediators directly from the uterus.

Although it is well known that excessive amounts of oestrogen can induce effects such as vomiting there is little evidence that this hormone has a direct action on gastrointestinal function at more physiological levels. Fluctuations in oestrogen during the menstrual cycle have been suggested as the cause of the observation that women consume varying amounts of food and calories during their menstrual cycle. These variations could indirectly affect gut function, particularly if accompanied by changes in the consumption of dietary constituents such as fibre. An alternative which has largely been ignored is the possibility that male hormones might protect the gut from insults rather than female hormones causing problems. We have recently suggested this as an explanation for our observation that inducing diarrhoea in healthy volunteers sensitises the gut of women but not men.⁴

Social influences

The observation that males have a more regular pattern of bowel habit than females may, simply of course, be a reflection of the fact that men tend to work more regular hours than women and thus train themselves into a more regular bowel habit. Much more work needs to be done on the subtle psychological and social effects of gender in order to help us understand both normal and disordered function, particularly in relation to the gastrointestinal tract.

Another observation in need of urgent clarification is the claim that in the Indian subcontinent IBS is more common in men than in women. If this is true, then many of our concepts about gender and IBS may have to be completely rethought. However, it is known that in Indian society, men consult doctors more often than women. If this is a result of women being discouraged from consulting, it may be that they do suffer from the same increased prevalence of IBS as in Western societies but are just not seeking help for their problem.

Gynaecological problems and women with IBS

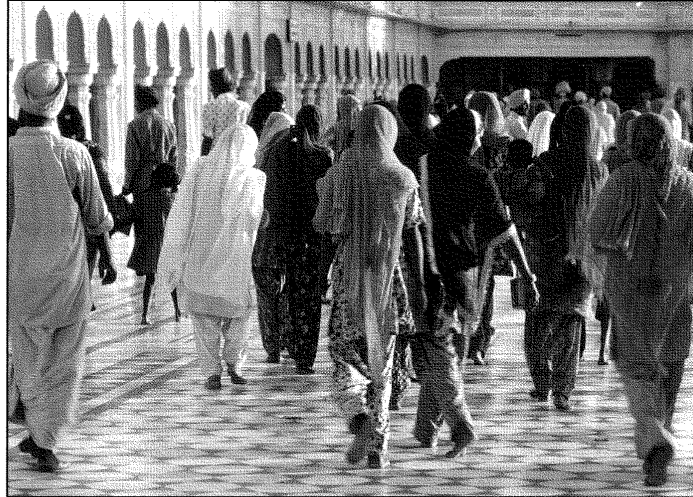
The data reviewed above do not adequately explain why females suffer from IBS in greater numbers unless women with IBS represent a group that is unduly sensitive in some way to the gastrointestinal effects of their sex hormones. There is some evidence to support this view and it is an area in need of further research. Certainly, women with IBS appear to have an exaggerated response to the normal 'menstrual effect' on bowel function and often complain of an exacerbation of their symptoms at the time of menstruation.⁵

Whatever the reason for the increased prevalence of IBS in women there is no question that it is a major cause of diagnostic confusion with gynaecological problems. We have shown that IBS is extremely common in patients attending gynaecological clinics and when present often leads to an unsatisfactory gynaecological outcome.⁶ The prevalence of IBS varies according to the reason for gynaecological referral, being relatively low in association with problems such as cervical abnormalities and being at its highest (over 50 per cent) in patients with pelvic pain.⁷ This suggests that the main reason for diagnostic confusion is symptom overlap and mimicry rather than one problem causing another. In addition, the proximity of the female sex organs and the gastrointestinal tract in the pelvis must also be a further confounding factor.

We have also shown that the presenting symptom can be crucial in deciding the route of referral and therefore whether the patient first sees a gastroenterologist or a gynaecologist. For instance, if a patient with IBS happens to have particularly painful or heavy periods with her abdominal pain this may lead to a suspicion of gynaecological problems where none exist. Another common cause of confusion is the symptom of dyspareunia.⁸ This is an extremely common and intrusive symptom that can accompany IBS⁹ and which, not surprisingly, is seldom referred to the gastroenterologist. The major clues to IBS being linked with the dyspareunia are:

- the pain is deep
- it is similar to the pain experienced at other times
- its onset may be delayed for several hours after intercourse
- the whole problem is associated with other symptoms of IBS, particularly disordered bowel function.

Finally, in the young woman with lower abdominal or pelvic pain, the possibility of either pelvic inflammatory disease or endometriosis has to be borne in mind when deciding on the most appropriate route of referral. This can be



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an extremely difficult decision and we have found that, again, the presence of disordered bowel function makes the diagnosis of IBS more likely, particularly if it is accompanied by abdominal pain at other sites, especially above the level of the umbilicus.

Conclusions

IBS can mimic gynaecological disease and vice versa. An abnormal bowel habit is the single symptom that separates the conditions most effectively but sometimes further investigation by either specialty is necessary. However, in the gynaecological setting, if investigation reveals only minor abnormalities, it might well be worth seeking a gastroenterological opinion before embarking on more aggressive, particularly surgical, approaches to symptom relief.

“The main reason for diagnostic confusion is symptom overlap and mimicry”

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