



Gynecological Aspects of Irritable Bowel Syndrome

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Over a decade ago, investigators noted that approximately half of the women attending a gynecology clinic had symptoms (e.g., abdominal pain, change in bowel pattern) compatible with a diagnosis of irritable bowel syndrome (IBS). Since that study, a number of other studies have demonstrated a higher prevalence of gynecologic disorders, such as pain associated with menstruation (dysmenorrhea) and premenstrual distress syndrome in women with IBS as compared to those without IBS. In a variety of cultures, more women seek health care services for symptoms of IBS when compared to men. Women with IBS are also more likely than those without IBS to have abdominal surgical procedures—including hysterectomy and cholecystectomy. These epidemiologic observations have led a number of clinicians to ask questions as to whether and why gender differences exist. This article is intended to briefly address the state of science related to two areas. First, what is the overlap between gynecological and functional gastrointestinal (GI) symptoms and disorders (IBS, in particular). Second, what potential physiological mechanisms may account for the co-existence of gynecological and gastroenterological conditions in women.

Symptom Overlap

Many women (with and without functional GI disorders) experience variations in GI symptoms—including abdominal pain, diarrhea, bloating, and constipation—during their menstrual cycle. Abdominal pain and diarrhea tend to increase in the late luteal (premenstrual phase of the cycle) and reach a maximum on the first to second day of menstrual flow. Bloating and constipation, on the other hand, tend to increase post ovulation (around day 14) and stay increased until the day before or the first day of menstrual flow. Women with IBS have overall higher levels of symptoms (more frequent, more bothersome) regardless of cycle phase and also demonstrate these same menstrual cycle related patterns. It is important to note that such GI symptoms are not directly linked to stereotypical menstrual cycle associated changes in mood (e.g., depression, anxiety, irritability). However, women with

IBS also report other more frequent and more bothersome symptoms such as fatigue, backache, and insomnia.

Oral contraceptives containing estradiol and progestin appear to have little impact on GI symptom or bowel patterns related to the menstrual cycle. This may be due to the fact that most of these regimens include 7 days without hormone treatment that coincides with the premenstrual/menses phase of the cycle. Thus, even women on oral contraceptives experience a phase of ovarian hormone withdrawal. The linkages between hormone replacement therapy and symptom experiences in postmenopausal women remain to be studied.

For many women, the link between GI symptoms and their menstrual cycle may not be intuitive. The use of a daily diary in which both menstrual cycle days and symptoms are tracked often helps women see patterns in their symptoms. This may provide reassurance that symptoms are cyclical and help women plan strategies related to diet or medications. While actual dietary intakes may not differ between women, with and without IBS, it may be that sensitivity to particular foods (e.g., gas-producing) is greater in women with IBS, particularly around the time of menstruation.

Gynecological and gastroenterological disorders overlap

Women with IBS more frequently report painful menstruation (dysmenorrhea) and premenstrual syndrome (PMS) compared to those without IBS. In our prior studies of over 150 menstruating women with IBS, approximately 45% and 35% self-identified themselves as also experiencing dysmenorrhea and PMS, respectively. Indeed women with IBS reported higher levels of uterine cramping pain at menses than women without IBS. In another study approximately 30% of women with IBS reported a history of chronic pelvic pain. Perhaps more difficult to clearly discern is the overlap between IBS and endometriosis. Several studies suggest that women with laparoscopic diagnoses of endometriosis [a condition in which tissue more or less perfectly resembling the uterine mucous membrane occurs abnormally in various locations in the

pelvic cavity] have greater bowel symptoms compatible with a diagnosis of IBS. Such overlaps in gynecological and gastroenterological conditions are noteworthy and are important areas of further investigation. Thus, investigators are challenged to examine menstrual cycle variations in motility, pain sensitivity, the processing of signals conveyed to the central nervous system (afferent input), and the manner in which messages are conveyed by the autonomic nervous system away from the brain and spinal cord (effector mechanisms) to the *visceral organs* (i.e., gut, glands, cardiovascular system).

Based on the prevalence of these chronic painful conditions in women, the question arises as to potential gender-specific mechanisms underlying IBS. Laboratory and clinical studies support the hypothesis that altered visceral sensations (visceral hyperalgesia, or increased pain sensitivity) plays a role in functional bowel disorders (e.g., IBS, non-ulcer dyspepsia), interstitial cystitis (inflammation of the bladder), dysmenorrhea, and ureter colic pain.

Visceral hyperalgesia is a consistent physiological finding in 50–90% of patients with functional GI disorders, such as IBS. Investigators have begun to consider whether gender differences occur in visceral pain perception and intensity and if so, at what level do gender and/or gonadal hormones modulate pain perception or pain behaviors. The relationships among estrogen and progesterone levels in women (as well as testosterone levels in men) and bowel function or pain sensitivity are less than clear. Indeed some studies in women suggest menstrual cycle differences in intestinal transit, gastric emptying, blood flow, motility, and bowel sensitivity, while other studies fail to demonstrate a relationship. Methodological issues within studies—such as failure to time ovulation, control for ovulatory versus anovulatory cycles, oral contraceptive use, reliance on retrospective self-report data, and to consider (the consideration of) subgroups of patients with IBS—may explain the lack of consistent findings. For the most part the effects of estrogen, progesterone, or their cycle patterns on bowel motility and pain sensitivity remain understudied.

Sexual functioning

Sexual functioning can be affected by both gynecological and gastroenterological conditions. Sexual dysfunction is reported by a disproportionately high number of patients (both men and women) with IBS, as well as women with painful menstruation. From our studies we have found that approximately 32% of women with IBS report concerns related to sexual functioning. Sexual dysfunction can range from decreased sexual drive (the most common symptom reported by both men and women with IBS) to painful intercourse. There are several potential reasons for this finding. First, visceral hypersensitivity appears to play an important role in IBS. The distention of the bowel with gas and/or fluid is perceived as uncomfortable or even painful. This sensitivity may be unique to visceral organs—gut and

glands—including the vagina, as opposed to an overall increase in pain sensitivity. In one study, the report of sexual dysfunction was positively associated with perceived GI symptom severity, but not with psychological symptom severity.

Summary

There has been increased attention given to the impact of IBS symptoms on women's lives. Chronic, persistent symptoms along with strategies to reduce symptom experiences can be disruptive to work and family responsibilities, and reduce overall quality of life.

There is a clear need for greater collaboration among health care providers in the fields of gynecology and gastroenterology. Research focused on women with overlapping medical conditions including dysmenorrhea, IBS, chronic pelvic pain, PMS, and chronic constipation needs to focus on physiological factors, as well as psychological factors that may be amplified in these conditions. Clinicians need to be aware that these conditions often co-exist and can challenge the selection of and compliance with appropriate therapies.

Another indicator of the potential seriousness of the condition is the relative rates of reported abdominal surgery between women with irritable bowel syndrome and those without the condition. While a third (34%) of women without IBS reported having had abdominal or intestinal surgery other than cesarean section, nearly twice as many women with IBS (58%) reported having had this type of surgery. The rates of reported gallbladder operations, hysterectomies, and appendectomies are twice as high or higher among women with IBS.

—Schulman, Ronca and Bucuvalas, Inc.
IBS in American Women, Executive Summary, p5, 1999.

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