

New insight on an enduring enigma

The common denominator for an array of complaints is abnormal pain processing—not anatomic disorders.

The most important new advance in chronic pelvic pain is recognition that this complaint often does not represent an anatomical disorder that can be seen, photographed, or excised away. It is a *syndrome*—a group of related disorders associated with abnormal pain processing. The abnormal pain processing may relate to other symptoms affecting mood, sleep, and autonomic function. The term for this array of complaints—chronic pelvic pain syndrome—reinforces the concept that a group of disorders produces the subjective experience of pain.

This new understanding is steering us toward therapeutic strategies that may be more helpful than multiple uncoordinated treatments at the hands of different specialists—the unfortunate experience of too many women.

Clinicians have long understood that for many patients, there is no clear diagnosis. Patients become frustrated with clinicians' apparent inability to help, or even take their complaints seriously. Doctor-shopping results in multiple tests, medication trials, and surgery. This chain of events stems from the traditional anatomic model of disease, which attributes pain to an organ or tissue abnormality that surgical correction might resolve.

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Key findings. Clues that the anatomic model is inadequate have been a part of gynecologic teaching for decades, but recent studies confirm these impressions about chronic pelvic pain:

- Anatomic features noted at surgery may not give reliable information about the cause;
- The effect of surgical treatment is similar to placebo, at least short-term;
- A history of abuse is common.

'Difficult' patient or other disease was blamed when surgery failed. The traditional approach was to seek an anatomic abnormality such as endometriosis, adhesions, or pelvic congestion, and treat the abnormality with surgical removal of implants, scar tissue, or the pelvic organs altogether.

(The anatomic model still applies to acute pelvic pain; ruptured ovarian cyst, ectopic pregnancy, and appendicitis are highest on the list of diagnostic possibilities.)

Surgeons were convinced that their operations were successful, largely because they characterized cases that failed to get better as evidence of nongynecologic disease or a patient who simply wanted to be difficult.

Pivotal study: 'Integrated' treatment achieved better results. One of the earliest clues that surgery might not be the best approach to chronic pelvic pain came from a study of 106 patients randomized to 2 different strategies¹:

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- **In the “standard” approach**, laparoscopy was used early, and patients with no anatomic abnormalities were then evaluated for other problems, such as psychological disorders.

- **In the “integrated” approach**, the pain experience was thought to have 4 components: nociception, pain sensation (which includes processing), suffering, and pain behavior. This approach included psychological and physical therapy as well as evaluation for anatomic abnormalities, generally using nonsurgical methods.

Among the 57 women randomized to the integrated approach, 5 (9%) underwent surgery, compared with 100% of the group randomized to standard therapy. One year later, 75% of the women assigned to the integrated approach reported improvement in pain, compared with 41% of those in the standard group.

In both groups, associated symptoms were common at the onset of therapy, including backache, nausea, malaise, headache, and insomnia. These symptoms were more likely to improve with the integrated approach.

Initial strategy: Avoid surgery

Winkel CA. Evaluation and management of women with endometriosis. *Obstet Gynecol.* 2003;102:397-408.

Avoidance of surgery can be recommended except perhaps in patients with a mass or discrete and localized abnormalities (eg, tender uterosacral nodule with deep dyspareunia as the only complaint). This strategy challenges the anatomic model of chronic pelvic pain, but is consistent with challenges to the anatomic model of chronic pain at other sites, such as chronic back pain.

Empiric medical therapy may be preferable in women believed, clinically, to have endometriosis without a mass or who wish to get pregnant right away, Dr. Winkel noted.

Many diagnoses can be made in women with chronic pelvic pain, in addition to endometriosis (eg, irritable bowel syndrome, interstitial cystitis, vulvodynia, fibromyalgia, and somatization disorder); these may reflect

different manifestations of the same disorder of pain processing, which is often associated with mood and sleep abnormalities. Therapy to improve sleep, physical conditioning, and coping strategies appears to be more helpful than surgery as an initial approach.

Visual and histologic diagnoses of endometriosis at odds

Walter AJ, Hentz JG, Magtibay PM, Cornella JL, Magrina JF. Endometriosis: correlation between histologic and visual findings at laparoscopy. *Am J Obstet Gynecol.* 2001;184:1407-1413.

Stratton P, Winkel CA, Sinaï N, Merino MJ, Zimmer C, Nieman LK. Location, color, size, depth and volume may predict endometriosis in lesions resected at surgery. *Fertil Steril.* 2002;78:743-749.

Stratton P, Winkel C, Premkumar A, et al. Diagnostic accuracy of laparoscopy, magnetic resonance imaging, and histopathologic examination for the detection of endometriosis. *Fertil Steril.* 2003;79:1078-1085.

Three recent studies assess the discrepancies between visual and histologic evidence of endometriosis in women with chronic pelvic pain. Earlier studies had indicated that visual diagnosis is not equivalent to histologic diagnosis, and that failure to see endometriosis does not mean it is not there.

In all 3 studies, visible lesions that appeared to be endometriosis were excised and evaluated by a pathologist.

- Walter et al found that 12 of 37 women with visible lesions had no histologic evidence of endometriosis; the positive predictive value of visualized endometriosis was 62%.

- Stratton et al found a similar 61% of 314 lesions believed on visual inspection to be endometriosis were histologically confirmed. Of 44 women with visual criteria suggesting endometriosis, 6 (14%) were unconfirmed by histology. This discrepancy was noted in women considered upon inspection to have “mild” disease, of whom 5 of 13 (38%) had no histologic evidence.

All of the investigators recommended histologic confirmation of a diagnosis.

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Does a diagnosis benefit the patient? In a commentary, Dr. Frank Ling² questioned whether histologic or visual diagnoses are useful. After all, he argued, histologic diagnosis of endometriosis does not prove it caused the pain—prior studies showed a high prevalence of endometriosis in asymptomatic women.

Focusing on what the inside of the pelvis looks like, whether through a laparoscope or the pathologist's microscope, may leave the woman with chronic pain without relief. Ling made a case for empiric medical treatment of endometriosis, without surgery.

Sham surgery: A potent placebo

Swank DJ, Swank-Bordewijk SC, Hop WC, et al. Laparoscopic adhesiolysis in patients with chronic abdominal pain: a blinded randomised controlled multi-centre trial. *Lancet*. 2003;361:1247-1251.

In chronic pelvic pain, the placebo effect can be potent—another indication that the anatomic model is not the answer. In the mid-90s, Sutton et al³ found equal responses to sham surgery and laser laparoscopy at 3 months postoperatively in patients with endometriosis-associated pain—but laser laparoscopy had an advantage over sham surgery at 6 months postoperatively.

Swank et al compared laparoscopic adhesiolysis with sham surgery in 100 adults (87% women) with chronic abdominal pain without intestinal stricture. At 1 year, 27% were pain-free or much improved, and there was no difference in visual analog score improvement, regardless of type of surgery. They concluded that abdominal pain can improve after surgery, but the benefit is not likely due to adhesiolysis.

In both groups, as in the Sutton study, reduced pain was maximal at 3 months and somewhat less by 6 months after surgery, supporting the likelihood of a placebo effect.

Possibly, the response to surgery was due in part to reduced anxiety after surgery excluded cancer, yet the mean number of prior operations was almost 3, suggesting that many of these patients had already had the opportunity to be reassured by benign operative findings.

Past abuse: The mind-body link

Lampe A, Doering S, Rumpold G, et al. Childhood pain syndromes and their relation to childhood abuse and stressful life events. *J Psychosom Res*. 2003;54:361-367.

It has been noted for years that women with chronic pelvic pain are more likely to have a history of sexual abuse than women without chronic pelvic pain. In a study of the chronic pain/abuse relationship, Lampe et al found “complex mutual interactions among childhood abuse, stressful life events, depression, and the occurrence of chronic pain,” and urged clinicians to consider these factors when treating patients.

It is clear that chronic pain syndromes and abuse are linked, but there is disagreement on whether pelvic pain is associated with sexual abuse more than other abuse, or if sexual abuse is associated more with pelvic pain than chronic pain at other sites.

These associations were once explained as physically and psychologically traumatic events being reenacted through illness behaviors. A theory more consistent with current views of pain-processing disorders is that physical or psychological trauma may “kindle” abnormalities of neurotransmitter function to which a patient is genetically predisposed. This model is analogous to the view that depression is a genetic disorder kindled by a major loss or adverse life event.

Such a view requires that we relinquish the mind-body dualism first proposed by Descartes in the 17th century, long before we recognized that neurotransmitters mediate mood as well as motor function, and that life events can alter the chemistry of the brain. ■

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