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Difficult-to-diagnose pelvic pain

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CASE

The patient is a 34-year-old woman who has been seeing you about chronic pelvic pain for some time now. You have performed a thorough workup. You have ruled out fibroids, endometriosis, and inflammation, but you cannot seem to find a source for the patient's pain. There is no evidence of bowel disease, such as Crohn's disease, or of appendicitis. Findings from previous pelvic examinations and Pap smears have been normal, except for mild ovarian tenderness. The patient is not pregnant but has two living children. Pelvic sonograms have been unremarkable.

You decide to order CT of the abdomen and pelvis with oral and IV contrast enhancement. CT can show abnormalities of the bowel; some vascular abnormalities; free fluid or air; abnormalities of the liver, spleen, or kidneys; and, in some cases, adnexal masses. This patient's CT study is shown in Figure 1. **What does it reveal?**

DISCUSSION

The CT shows several enhancing serpentine structures (arrow) in the pelvic cavity on each side of the uterus. These structures represent varicose veins in the pelvic cavity. These can contribute to a condition known as pelvic congestion syndrome (PCS).

PCS is an often overlooked diagnosis in the evaluation of women with chronic pelvic pain. Sometimes such women receive a wrong diagnosis of depression. Although the etiology of PCS is unknown, anatomic or hormonal abnormalities are thought to play a role. PCS should be considered if pelvic pain persists after other causes, including infection, bowel disease, endometriosis, and fibroids, are eliminated.

Typically, a patient with PCS will be of childbearing age and multiparous. Symptoms include low backache, tenderness of the ovaries, frequent urination, postcoital pain, abnormal menses, and vaginal discharge. The patient may report that her symptoms worsen before or during menses, when standing, during or after intercourse, or during pregnancy. PCS can also be associated with a retroverted uterus, polycystic ovaries, and full-

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FIGURE 1

Abdominal CT in a woman with chronic pelvic pain



ness of the legs. It should also be noted that not all patients with dilated pelvic veins have symptoms.

On physical examination, there may be ovarian tenderness. Varicosities may also be seen on the thighs or labia. The cervix can have a blue coloration due to venous congestion.

The veins of the pelvis can be evaluated using many methods. These include venography, sonography, CT, MRI, and sometimes laparoscopy. Venography is considered the most accurate method, but it also carries more risks because of its invasiveness.

Sonography or cross-sectional imaging is more commonly performed first, especially if other diagnoses are still being considered, as these modalities also visualize surrounding anatomy. Sonography may show thickening of the endometrium and increased volume of the ovaries, which can be associated with PCS. Sonography can also show anechoic structures that are linear or serpiginous, measure more than 5 mm in diameter, and are located on either side of the uterus and cervix (compatible with dilated pelvic veins). These veins should increase in diameter with standing or with the Valsalva's maneuver. The sonogram for the patient in this case had normal findings.

MRI and CT may show dilated veins in the pelvis. CT is not generally used to obtain a detailed view of the

FIGURE 2

Follow-up radiograph in the same patient after treatment



pelvic organs, so the finding of dilated pelvic veins may be incidental if the test was ordered for other reasons. MRI may show uterine abnormalities, such as fibroids or adenomyosis. Laparoscopy can visualize varicosities in the pelvis if the patient is placed in reverse Trende-

lenburg's position and the intra-abdominal pressure is decreased (to allow filling of the veins).

Treatment of PCS is directed toward alleviation of symptoms, so treatment is not necessary if the patient is asymptomatic. Medications—including vasoconstrictors and drugs to suppress ovarian function—are sometimes used but may give only short-term relief. Surgical options include removal or ligation of the veins, uterine ventrosuspension (if the uterus is retroverted), or hysterectomy with bilateral oophorectomy (usually performed only as a last resort).

Venous embolization is another option and is generally performed by an interventional radiologist. During this minimally invasive procedure, a small catheter is used, approaching from the groin region, to access the ovarian veins. Venography is utilized to demonstrate the varicosities. Then, using fluoroscopy, the radiologist performs selective embolization of the veins. This can be done with stainless steel coils, absorbable sponges, or liquids made specifically for embolization. This procedure has been reported to provide significant relief in more than 70% of symptomatic patients. Sometimes embolization may have to be repeated to obtain better results.

Figure 2 shows the embolization coils used to occlude this patient's ovarian veins. Her symptoms improved significantly after treatment. □

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management registers, ensuring that they belong on those registers and removing them if they do not.

The positive aspect of the system is that patients who need testing and/or treatment for their chronic diseases can be easily identified and invited in for interventions. Accurate, complete feedback on achievement of evidence-based targets is very helpful for appropriate management of chronic diseases. However, traditional clinical competencies do not suffice—someone, be it nurse, PA, doctor, or manager, must recognize errors and omissions not just in clinical care but also in data entry and analysis.

Not a panacea

Analyzing the limitations of pay-for-performance programs is beyond the scope of this article. However, it should be noted that the competencies required to perform well in a pay-for-performance system do not include many important aspects of clinical care and that most competencies are not measured at all. For example, accuracy of diagnosis, ability to communicate well with patients, proper utilization of specialty resources, and correct treatment of many to most patients fall entirely outside the pay-for-performance system. It is possible, of

course, that the QOF measures serve as proxies for more complex, difficult-to-measure clinical competencies.

Conclusion

First-hand experience in Britain's pay-for-performance program confirms the important competencies required by PAs who work in a system that uses quality incentive programs—proficiency in evidence-based medicine and skillful use of health information technology. Although many important competencies are not measured, participation in a well-designed quality incentive program assists clinicians in evaluating many aspects of the quality of their care. □

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