Set the Appendectomy Bar Low for Pregnant Patients

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PASADENA, CALIF. — The diagnosis of appendicitis can be exquisitely difficult in a nonpregnant patient. Pregnancy only makes the task more daunting.

But early diagnosis and prompt surgery can mean the difference between life and death for the mother and the fetus, said Dr. J. Gerald Quirk, chairman of obstetrics, gynecology, and reproductive medicine at the State University of New York at Stony Brook.

"The risks of temporizing appendicitis in pregnant women are quite grave," he said at a meeting of the Obstetrical and Gynecological Assembly of Southern California.

'What you're doing is just increasing the risks [of appendiceal perforation] … by waiting.'

DR. QUIRK

About 1 in 1,000 pregnancies are complicated by appendicitis, and appendectomy confirms the disease in two-thirds to three-fourths of patients.

Perforation is not an uncommon result of delay, with dire consequences. Fetal death results from unperforated appendicitis in 3%-5% of cases; a perforated appendix is associated with a 20%-30% fetal mortality rate. Maternal mortality, seen in about 0.1% of cases of unperforated appendicitis, rises to 4% with perforation.

The threshold for surgery should therefore be low, and increasingly so as the pregnancy progresses, since perforation is twice as common in the third trimester as it is in the first or second. "What you're doing is just increasing the risks … by waiting."

And still, in part out of reluctance to operate unnecessarily, "We are loathe to make the diagnosis, and a lot of surgeons are loathe to act on the diagnosis," he said.

In fact, when special accommodations are made for physiologic changes associated with pregnancy, uncomplicated surgery and anesthesiology are not thought to be linked to adverse perinatal outcomes, said Dr. Quirk. "In most cases, I think one can be assured that what's best for Mom is best for the fetus."

It is not surgery that poses the greatest risk, but, in the words of Dr. E.A. Babler in 1908, "[the mortality of appendicitis is] the mortality of delay."

Uncertainty drives that delay, since many classic signs and symptoms may not be present or may be confusing in the pregnant patient, and the differential diagnosis of appendicitis is long and complex. (See box.)

The location of the appendix varies during different stages of pregnancy. "What we do know is that it moves around," he said.

Direct abdominal tenderness is a fairly reliable sign of appendicitis during pregnancy, but rebound tenderness is much less reliable, because the enlarged uterus shields the abdominal wall. Rectal tenderness is frequently absent, said Dr. Quirk.

Anorexia, present in nearly all nonpregnant patients with appendicitis, occurred in only one- to two-thirds of pregnant patients in a 1975 study from Parkland Hospital in Dallas, he noted. In early pregnancy, anorexia may be associated with morning sickness, further complicating its usefulness as a contributor to a diagnosis of appendicitis.

Dr. Quirk said a urinalysis showing many white cells but no bacteria may reinforce the diagnosis of appendicitis in a pregnant woman, because periureteritis can develop over the right ureter.

Ultrasound or spiral CT imaging can help but is not always reliable. In any case, do a surgical consult immediately and promptly decide to operate or not. Perioperative antibiotics should be administered.

General anesthesia is usually well tolerated in pregnancy; laparoscopy and laparotomy appear equally safe. The incision generally is made over the point of maximal tenderness or at the midline if the diagnosis is seriously in doubt or if diffuse peritonitis might be present.

The table should be tilted 30 degrees to the left, and uterine manipulation should be minimized. Some institutions advocate external fetal monitoring.

Post surgery, Dr. Quirk recommends monitoring the uterus for contractions. The mother should ambulate early and be kept well hydrated. During rest, the patient should maintain the tilt position. ■

Differential Dx of Appendicitis

Nonobstetric Conditions
Urinary calculi
Cholelithiasis
Cholecystitis
Bowel obstruction
Gastroenteritis
Mesenteric adenitis
Colonic carcinoma
Rectus hematoma
Acute intermittent porphyria
Perforated duodenal ulcer
Pneumonia
Meckel's diverticulum

Obstetric Conditions
Preterm labor
Abruptio placentae
Chorioamnionitis
Adnexal torsion
Ectopic pregnancy
Pelvic inflammatory disease
Round ligament pain
Uteroovarian vein rupture
Carneous degeneration of myomas
Uterine rupture (placenta percreta; rudimentary horn)

Source: Dr. Quirk