Acute appendicitis in pregnancy

Acute appendicitis is not increased in frequency during pregnancy but when it occurs the diagnosis may be more difficult and the willingness of obstetricians to subject their patients to exploratory laparotomy is reduced because of concerns about the risk of consequent preterm labour.

The important clinical symptoms of acute appendicitis are no different from those in the non-pregnant state: lower abdominal pain especially on the right, nausea, vomiting, constipation. The signs may differ as pregnancy advances with upward displacement of the focus of right-sided pain.

The findings of a neutrophil leukocytosis with a shift to the left may be helpful however it is important to remember that a mild leukocytosis can be found in normal pregnancy.

Similarly a microurine showing leukocytes may be a confounding finding. Because there are concerns about the adverse effects of surgery in pregnancy, attempts are made to reduce the false negative rate of laparotomy by preoperative investigation such as graded compression abdominal ultrasound and computerized tomography. This imaging has the potential to reduce the rate of negative laparotomies from its usual average rate of >20% to 8%.

Studies in the non-pregnant patient indicate that once 36 hours have elapsed from the onset of symptoms the rate of appendiceal rupture is approximately 5%. The production of peritonitis is known to seriously worsen the outcome for mothers and fetuses. Similarly where pregnant women have been left in hospital for more than 24 hours without surgery there is a significantly higher rate of complications such as pelvic abscess and perforation. Maternal death is rare but occurs almost always in those women who develop generalized peritonitis.
Acute appendicitis in pregnancy _neonatal effects_

The key effect is on preterm delivery. The risk of prematurity may be as high as 50%. This can be followed by respiratory distress syndrome, apnoea, sepsis and jaundice.

The effects of sepsis on a fetus in utero appear to be considerable: there may be an increased incidence of intraventricular haemorrhage and periventricular leukomalacia disproportionate to the degree of prematurity. This has the potential to produce long term neurological damage to the fetus.

The high rate of prematurity means that acute appendicitis in pregnancy should trigger urgent in–utero referral to a major obstetric unit where the consequences of prematurity can be optimally treated. Once lung maturity has been enhanced by corticosteroids, it may not be prudent to prolong efforts to suppress premature labour, particularly if there has been significant sepsis such as appendiceal perforation.

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