

Pregnant Patient with Suspected Appendicitis

1. If patient is in her 2nd or 3rd trimester
 - a. Transfer to NMC Balboa for further evaluation – refer to transfer checklist
2. If patient is in her 1st trimester
 - a. Labs including ABO/Rh, CBC, chemistry
 - i. A mild leukocytosis may be normal in a pregnant patient – up to 13.6 in the 1st trimester
 - b. Graded compression ultrasound is the diagnostic test of choice
 - i. A sensitivity 67 to 100%, specificity 83-96% (1) – highly variable and operator dependent
 - ii. Transvaginal ultrasound **by radiology** should also be obtained. Make sure sonographer looks for jets at the UVJs and looks for UVJ stones.
 - iii.
 - c. MRI may be considered if ultrasound is inconclusive. OB should see patient before doing an MRI and should consent patient for MRI:
 - i. Lack of consensus regarding risks to developing fetus, particularly in early pregnancy
 - ii. There are theoretical risks due to magnetic fields, acoustic injury to developing ear (4), teratogenic effects in mice (5)
 - iii. FDA currently recommends caution with use and labeling that safety with respect to the fetus “has not been established”
 - iv. Most studies have not shown adverse effects
 1. One study followed children who were exposed to MR while in utero from 9 months until 9 years of age – no deleterious effects were noted
 - d. Protocol for MRI is as follows (MR tech should be able to find it on the MR scanner):
 - i. Contrast: None
 - ii. Sequences:
 1. Cor SSFSE Ax SSFSE
 2. Cor FIESTA
 3. Ax FIESTA
 4. Ax SSFSE FS
 5. Ax T1 IP and OP
 6. Ax VIBE

e. If it's after hours the study can be sent to teleradiology.

1. Williams R, Shaw J. Ultrasound scanning in the diagnosis of acute appendicitis in pregnancy. *Emerg Med J.* 2007; 24(5): 359-60.
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3. Pedrose I, Lafomara M, et al. Pregnant patients suspected of having acute appendicitis: effect of MR imaging on negative laparotomy rate and appendiceal perforation rate. *Radiology.* 2009; 250(3): 749.
4. Heinrichs WL, Fong P, Flannery M, et al: Midgestational exposure of pregnant mice to magnetic resonance imaging. *Magn Reson Imaging*, 8 (1986), pp. 65-9.
5. Tyndall DA, Sulik KK. Effects of magnetic resonance imaging on eye development in the C57BL/6 J mouse. *Teratology*, 43 (1991), pp. 263-75.