

CYSTIC ARTERY DOPPLER

WHO?

- To be done for patients who are sent to rule out cholecystitis.
- This will also apply to patients who come in for RUQ pain and end up having findings suspicious for chole such as GB distension or thickened wall.

HOW?

- Make sure that your color scale is set low enough that you can adequately access for flow.
 - The cystic artery should be seen without trouble in the majority of the cases that cholecystitis is a possibility for.
 - It may be hard to see in patients with a normal gallbladder. If that is the case, take an image with color of the area and mention in the report that it could not be seen.
- Sample as you would any other vessel, optimizing your spectral and color settings/scales.
- Measure the peak systolic velocity. Normal <40cm/s, above this is highly predictive of cholecystitis.
- Always use angle correction for an accurate PSV. Like MCA velocities, when the flow of the vessel is parallel to the ultrasound beam, the velocity will be more accurate. It is not required to have the vessel coming straight at you as in an MCA, but be sure to at least angle correct to align with it when needed.

WHERE?

- You will find the cystic artery in the wall of the gallbladder running along the surface of the liver.
- Make sure the vessel is in the gallbladder wall and not within the liver though!



WHAT NEXT?

- Method Section in VP- Add "Limited spectral doppler performed to assess for arterial flow."
- Report Velocity - add to GB section of VP report
- Epic billing code UORDL to be added if done.
- If unable to see it, mention in GB section of VP report, but do not include in Method Section and do not add the billing code.

THIS STATEMENT HAS BEEN ADDED TO OUR PROTOCOL:

- If evaluating for cholecystitis, or if suspicious GB findings such as thickened wall or distension:
 - Evaluate for Murphy's sign and include in the report.
 - Gallbladder length measurement. Normal <8mm
 - Color doppler of gallbladder wall to assess for hypervascularity
 - Spectral doppler velocity of the cystic artery which can be seen within wall of anterior gallbladder.
 - Normal velocity <40cm/s
 - If artery cannot be visualized, include color doppler of area and comment in report that it could not be seen.
 - Add code UORDGL if cystic artery is sampled.