

FEBRUARY PROTOCOL REVIEW

PART 3 –TX, Thyroid, Scrotal and Neonatal

LIVER TX EXAMS –

This list is purposely short, we will review this along w Abd Doppler in our Exam of Focus for March.

- Caudate lobe images needed in sagittal and transverse and labeled “Caudate Liver Trv/Sag”
- Measurement of the spleen should be included.
- Hepatic Veins – Report on the waveform only. Use spectral doppler to show the waveform, but the velocity is only needed if aliasing is seen w color doppler or if a stent is present. So that we are consistent, please do not include the velocity unless indicated.

RENAL TX EXAMS –

- Measure the Iliac artery PROXIMAL to the anastomosis of MRA
- Don't forget the serial sagittal and transverse gray scale images.
- Always know the type of anastomosis present and number of arteries and veins. Refer to the op report if you are uncertain or if it looks different than has been reported previously.
- MRA Velocities should be taken –
 - Single artery – Proximal, Mid, Distal
 - 2 or more arteries on a Carrel Patch – ONE Proximal (at common anastomosis), Mid in each vessel, Distal in each vessel
 - 2 or more arteries with separate anastomoses – Proximal for each vessel, Mid for each vessel, Distal for each vessel
- MRA peak velocity should be less than 200 cm/s. If elevated, turn in LLD to access for change.
- MRV peak velocity should be less than 100 cm/s. If elevated, turn in LLD to access for change.
- MRV should be evaluated at two areas – proximal and distal

NEONATAL HEAD EXAMS-

- Linear probe should be used to evaluate the subdural space and germinal matrix. Take images in a coronal view as well as a sagittal of the right and left through germinal matrix.
- Mastoid fontanelle views in our protocol state we should take an image of –
 - In coronal –
 1. Through mid brain
 2. Through the anterior cerebellar hemispheres
 3. Through the vermis
 4. Through the posterior cerebellar hemispheres.
 - In axial –
 1. Superior anterior view of cerebral peduncles
 2. Middle View through superior vermis
 3. Inferior-posterior view through the 4th ventricle and inferior vermis and cisterna magna
- Dr Dighe has a great lecture on neonatal heads that can be viewed on the website in the Educational Material section. These are the gradings of PVL and IVH from that lecture. Great examples of each to look at and would be a great review for everyone.

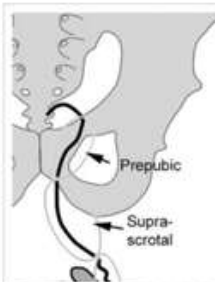
Grade 1	Hemorrhage limited to subependymal matrix
Grade 2	Hemorrhage extending into ventricular system, < 50%, without acute ventriculomegaly.
Grade 3	Hemorrhage extending into ventricular system, with acute dilatation because of flooding of 50% or more of one or both lateral ventricles
Grade 4	Hemorrhage grade 1, 2 or 3 with extension into brain tissue.

• GRADE 1 – PERSISTING MORE THAN 7 DAYS
• GRADE 2 – DEVELOPING INTO SMALL PERIVENTRICULAR CYSTS
• GRADE 3 – DEVELOPING INTO EXTENSIVE PERIVENTRICULAR CYSTS
• GRADE 4 – IN DEEP WHITE MATTER DEVELOPING INTO EXTENSIVE SUBCORTICAL CYSTS

SCROTAL EXAMS –

- For torsion cases - Follow the spermatic cord from inferior to superior w a transverse cine clip looking for twisting of vessels.
- If a hernia is questioned, we need to also add on a hernia exam.
- Vas deferens should be evaluated in cases of infertility. (See insert from SonoBuzz Edition 4 Teaching Corner.) Measure overall thickness from hypoechoic wall to hypoechoic wall and lumen size from echogenic mucosa to echogenic mucosa in longitudinal plane.

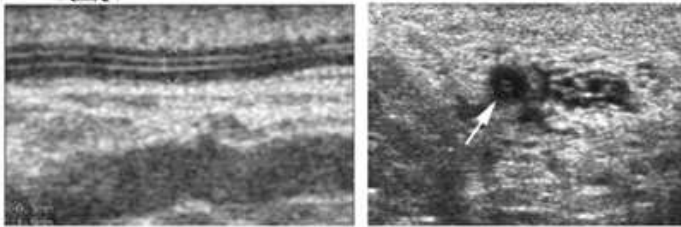
Teaching corner:



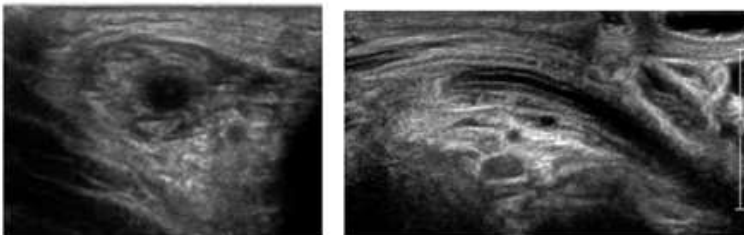
In patients with infertility evaluation of the vas deferens is important. A dilated vas could suggest distal obstruction which can be treated surgically. Vas deferens can be evaluated in 3 locations prepubic, suprascrotal and scrotal. If you take a transverse cine clip from the groin following the cord into the epididymis you should be able to see the prepubic and the suprascrotal portion of the vas deferens.



On longitudinal views, the central lumen is seen as a pair of closely spaced parallel linear reflections. In the cross-sectional view, the lumen appears as tiny paired reflections located in the center of the vas (see images below).



Normal vas measures 2 – 3mm in size with the lumen measuring 0.5 to 0.7mm. In addition to being obstructed, the vas can also be inflamed. The cord can then be echogenic and the vas can be dilated as well – see case below.

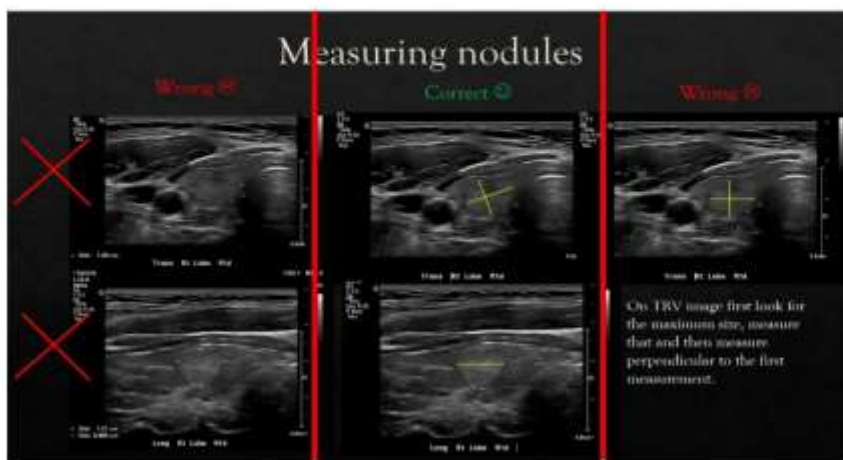


THYROID EXAMS–

- Only measure the 3 largest or most suspicious nodules. Use of dual screen to show trans and sag measurements creates a much easier read for the radiologists and for doing your reports. Try it out!
- Please review how to properly measure the size of a nodule. Measure the longest dimension in cross section, it is not always the AP! (See Teaching corner from SonoBuzz Edition 8 below.)

Teaching corner:

Please remember to measure AP and width on Transverse images and only the craniocaudal dimension on sagittal images – so one measurement on sag images and 2 measurements on trans images.



- 3 separate cine sweeps of the neck are needed bilaterally for post thyroidectomy exams – one through Level 1/6, one through Level 2/3/4, and one through Level 5.
- Non thyroidectomy cases we can do just do 2 cines sweeps through the neck – one medial neck sweep that captures Levels 1/6 and Levels 2/3/4, and one lateral sweep showing level 2/3/4 and Level 5
- Be sure to include the Viewpoint drawing for any pre or post thyroidectomy patients. Illustrate locations of nodes on neck level image and attach the illustration to the VIEWPOINT exam. If no abnormal lymph nodes are seen, this is not needed. Saving the illustration will attach it to the images in the VIEWPOINT study, and the illustration will be sent to GE PACS with the other images.

1- Within the Head and Neck VIEWPOINT templates, Select the Extensions icon, then Drawing Import.



2 - The Select Drawing pop up window will show the Neck illustration. Double click on this and the file will open as a Microsoft Paint file.



3 - Use the paint program to draw on the picture to map the location of abnormal lymph nodes. When you are done, save and close the file. This will add the drawing to the ultrasound images on Viewpoint.

