

SPINAL CANAL ULTRASOUND

Patient Prep:

1. None.
2. Age: Newborn – through 6 months.

Survey:

Perform a real-time survey of the spine with position of conus medullaris in lumbar region. Evaluate for CSF pulsation.

Use Doppler or color flow to distinguish vessels and on any abnormalities.

Image Documentation:

Each image must be labeled with the patient's full name, medical record number, accession number, initials of the imaging technologist, organ/area identification, scanning plane and patient orientation if different from supine.

If an image of a structure is not well seen, take an image of the structure and annotate the purpose of the image.

General Procedure description:

1. Identify position of conus within lumbar vertebrae and tethered cord.
2. Evaluate for pulsation of cerebral spinal fluid (CSF).
3. Evaluate for sacrum dimple and presence of tract to spinal cord.
4. Evaluate for hairy tuft.
5. The conus medullaris tip needs to reside above the L2-L3 disc space to be normal.
6. Evaluate thoracic spine for syrinx. If there is an abnormality with the distal cord, ie: low conus/tethered cord.
7. This exam can be performed from newborn through 6 months.

Guidelines for pediatric spine ultrasound:

SPINE

1. Place patient in the prone position.
2. Complete documentation in longitudinal plane of lumbar spine with location of conus medullaris. Label the vertebrae on all images (ex T12 L1 L2 L3 L4 L5). Verify this position by counting from L5-S1 up. Also, verify by counting from T12 down by locating the 12th rib. Make sure the verification of location is performed multiple times and that the conus medullaris is in the same location each time.

3. The Conus Medullaris tip needs to reside above the L2-L3 disc space to be normal.
4. Verify the shape and central position of the cord. The tip should come to a point.
5. In longitudinal plane, confirm cerebral spinal fluid (CSF) pulsation with cine clip.
6. Provide in transverse, an image of each space between vertebrae levels T12-L5.
7. Image hairy tuft, dimple or mass in longitudinal and transverse plane. Evaluate for a fistula tract from hairy tuft, dimple or mass to spinal cord. If present, provide images.
8. If possible, perform a longitudinal panoramic view of spine with labels T12 – L5.
9. Complete documentation in longitudinal plane of thoracic spine for syrinx if distal cord abnormality noted.

All images with color Doppler images should be with and without color.

All measurement images should be with and without measurement.