

Procedure Name: Pediatric Spine

Updated 5/30/19

General Description:

This is a screening exam for most suspected neonatal spinal abnormalities, such as spina bifida occulta, cord tethering, masses, infections and the degree of clinically obvious abnormalities.

Indications:

May include but not limited to posterior mid-line cysts/masses, mid-line skin dimples or sacral pit, tufts of hair, visible hemangioma/skin discoloration, anal atresia.

Limitations:

Contra-indicator based on patient age (generally performed from 0-4 month's age range). Caution needs to be exercised with open (or near-open) tube defects. If scanning is required in these circumstances, sterile technique should be observed.

Equipment Selection:

A high frequency, linear array transducer, minimum 8Mhz, with ideally a large footprint to offer more length of the image field should be used.

Patient Preparation:

NPO 3 hrs prior to study. Feeding (with bottle) at start of study to help induce calming effect or patient to arrive an extra 20-30 minutes early to breast feed immediately prior to imaging. Use warm gel, warm room and a warm blanket placed under the patient if possible. Patient should be positioned prone with a rolled towel under the baby's abdomen to slightly widen the posterior inter-spinous spaces.

Imaging Sequence:

The following imaging sequence is for a normal exam. Include additional images of pathology to demonstrate dimensions in three planes, shape, vascularity and relationship to adjacent anatomy.

- Identify the 12th rib and thus T12. The next inferior vertebrae are L1, L2 and so forth all the way thru L5, then S1 through S5. Coccyx will usually not be ossified, but occasionally if there is an extra ossification inferior to S5, this will be coccyx. Verify by the count by identifying the lumbo-sacral junction and count up from L5.
- Take images in LONG starting at T12 and moving down, labeling every vertebrae in the image each time, making sure to document the level of the conus medullaris. This should be above L3 by 3 months old. Verify counting from top to bottom and bottom to top.
- Document cord movement using M-mode and over filum terminale
- Take LONG and TRANS images of the sacral dimple/pit
- Finish with TRANS images at every vertebrae starting at T12- coccyx, demonstrating cord, conus and nerve roots
- Appropriately document any pathology identified