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MR TOTAL SPINE CSF LEAK WITHOUT CONTRAST - Deta...

Study Result

Impression

1. Technically successful pressure augmented CT dynamic myelography followed by delayed MR imaging of the spine with heavily T2 weighted 3D imaging.
2. No evidence of spontaneous CSF leak or venous fistula.
3. Given low clinical pre test probability, consider alternate etiologies of headache.

This exam was interpreted by a University of Colorado School of Medicine radiology physician with a certificate of added qualification (CAQ) in neuroradiology. If there are any questions regarding this report or other radiology questions, please feel free to contact a radiologist directly at 720-848-RADS (7237) or if in the UCH hospital or clinics at 8-RADS.

Final Report E-Signed By: Andrew Callen, MD at 6/3/2023 11:51 AM
WSN:PACSREM73183

Narrative

CT DYNAMIC MYELOGRAM, MR TOTAL SPINE CSF LEAK WITHOUT CONTRAST - 06/02/2023, 1632 (accession 23858510), 06/02/2023, 1802 (accession 23858512).

HISTORY: 45 years Male. Rule out CSF leak.

ANESTHESIA: Local anesthesia

COMPARISON: MRI total spine 12/22/21

PROCEDURE:

Available prior imaging was reviewed. The lumbar puncture and CT dynamic myelogram procedure and its risks, benefits

and alternatives were discussed with the patient, and all questions were fully answered. The patient's medications and allergies were reviewed. Written informed consent was obtained for the medical record, and a formal "time out" procedure was performed per CU protocol, verifying the correct patient, procedure, and procedure site.

Positioned right lateral decubitus on the CT table atop a HoverMat device, a suitable trajectory for access to the thecal sac was identified. The overlying skin was prepped and draped in the usual aseptic fashion and then anesthetized via local infiltration of approximately 5 mL 1% lidocaine. Under serial CT guidance, a 9 cm 22 gauge Whitacre spinal needle was advanced into the thecal sac at the L3-L4 level until return of clear-colored CSF was obtained.

CSF opening pressure was 15 cm H₂O. Subsequently, pressure augmentation with 5 mL aliquots of sterile saline was performed. After 5 cc saline, pressure was 20 cm H₂O. After an additional 5 cc saline, pressure was 29 cm H₂O.

A small volume of Isovue 300m contrast was administered via the needle and observed to flow freely within the thecal sac. A total of 10 mL of the contrast agent was then administered for dynamic CT myelography. The HoverMat device was inflated for approximately 10 seconds to facilitate the cranial passage of contrast. Rapid CT imaging was performed of the entire spine, for a total of 2 scans. The patient was then repositioned to the contralateral decubitus position, and one additional scan was performed.

Resisted inspiration was performed, whereby the patient was instructed to take slow deep inhalatory breaths through a 3 cc syringe during scanning.

The needle was removed and a sterile dressing was applied. The patient tolerated the procedure well, and there were no apparent immediate complications. The patient was transferred to the MRI suite for further imaging.

TECHNIQUE:

1. Helical CT axial acquisition encompassing the entire spine.
2. Multiplanar multisequence MR imaging of the entire spine with 3D T2 fat saturated sequences.

FINDINGS:

The study is of good quality, with dense intrathecal contrast filling the lateral thecal sac from the puncture site to the craniocervical junction, filling all perineural cysts.

Upon contralateral decubitus positioning, dense contrast adequately layered in the mid and lower contralateral aspect of the thecal sac.

No extradural contrast or CSF venous fistula present on dynamic CT myelography.

Limited views of the paraspinal soft tissues and viscera demonstrate post traumatic changes in the bilateral clavicles and several ribs.

Delayed MR imaging demonstrates mild edema in the lumbar epidural fat related to the same day lumbar puncture, but otherwise does not demonstrate any evidence of CSF leak. Unchanged contour of the patient's scattered perineural cysts throughout the spine.

Images

Tap here for images (best viewed on a computer)

Component Results

There is no component information for this result.

General Information

Ordered by Andrew Lawrence Callen, MD

Collected on 06/03/2023 11:39 AM

Resulted on 06/03/2023 11:51 AM

Result Status: Final result

This test result has been released by an automatic process.

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