Spiral CT to evaluate Catheter Status

A spiral CT may be ordered to evaluate the catheter for microleaks or to evaluate for arachnoiditis.

Initial evaluation:

- Patient should have plain films of the catheter and pump that are normal
- A side port aspiration should be normal (easily aspirate at least 2-3 cc's of CSF in one minute
- Interrogation of the pump should show no alarms and the expected reservoir volume

This section provides information about the supplies required for the procedure, and the steps involved in the procedure.

1) **Supplies Needed**
    a) Catheter access port kit #8540
    b) Sterile gloves
    c) Betadine swabs
    d) Intrathecal dye (make sure it is INTRATHECAL), at least a 10 ml syringe and needle for dye withdrawal

2) **Procedure**
    a) Patient should be on CT scanner bed
    b) For a pediatric patient, consider applying Emla cream one hour prior to the procedure.
    c) Expose the pump area.
    d) Open sterile catheter access port kit.
    e) Cleanse the SIDE PORT with betadine (start at the center with tiny circles working towards the outside – do this three times).
    f) Don sterile gloves
    g) Push air out of syringe in kit, attach extension tubing, attach shortest needle, and clamp the clamp on the tubing.
        i. If the patient is obese you will need to use a longer needle.
    h) Place sterile drape over the pump so that the pump shows through the circular cut out area of the drape.
    i) Align the Medtronic pump template with the edges of the pump.
    j) Insert the needle with syringe and extension tubing into the side access port of the pump.
    k) Unclamp the clamp
    l) WITHDRAW TWO (2) CCs of Baclofen and CSF (cerebral spinal fluid)
        i. If you are UNABLE TO WITHDRAW anything – you are done with the study. This means there is a problem with the catheter.
    m) Clamp the clamp on the tubing.

n) Radiology tech draws up 1 – 2cc of ISOVUE intrathecal dye.
    i. Must be appropriate for Intrathecal injection
o) Remove the syringe with Baclofen / CSF.
p) Attach the syringe with intrathecal dye to the extension tubing.
q) Unclamp the clamp on the tubing.
r) Start injecting the dye when requested by the radiologist. Push slowly
s) Remove syringe from the tubing
t) Remove needle from port
u) Cleanse betadine from the skin.
v) Scanning
    i. Spine protocol
    ii. Spiral scan
    iii. Start scanning within one minute of the injection. Start two levels above the catheter and continue to two levels below the catheter.
    iv. Do spine protocol through catheter until L1 spinal segment reached
    v. Then scan as abdominal CT
        1. Expand the view to include the abdomen as spiral CT moves down the catheter as it goes subcutaneously to pump

3) **Instructions for the patient**
Instruct the patient to go to MFB Clinic IMMEDIATELY following the procedure in order to have a bolus programmed to get Baclofen back to the tip of the catheter.
    a) Patients will exhibit signs of Baclofen withdrawal if this step does not occur.
    b) If patient is inpatient at DeVos contact Dr. Burdo-Hartman at Beeper# 479-1876 to program bolus or contact Mary Free Bed Clinic at 242-0395.

4) **Communication of Results**
    a) Please call MFB ITB pump coordinator M-F 0800-1700 (B# 616-230-0168) OR FAX results of the procedure to 456-4850 to communicate the results of the study, and to let the clinic staff know that the patient will be arriving shortly.
    b) These procedures are only done during normal business hours.