BLADDER PRESSURE MONITORING

I. PURPOSE:

To monitor intra-abdominal pressure via indwelling Foley Catheter, for patients being evaluated for abdominal compartment syndrome.

II. POLICY: Critical Care Registered Nurse I.C.U./C.C.U.

III. EQUIPMENT:

A. Nonsterile Gloves
B. Transducer monitoring kit with cable including pressure bag, pressure tubing with flush system and transducer.
C. 0.9% Normal Saline (500cc bag)
D. Bedside Monitor
E. Hemostats
F. Stopcock X 2
G. Luer Lock Syringe (30cc)
H. CHG Swab

IV. SET-UP:

A. Perform hand hygiene.

B. Using aseptic technique assemble the monitoring system.: transducer monitoring kit, Pressure bag, NSS.

C. Position patient in supine position with head of bed flat. Ensure that abdominal muscle contractions are absent.
D. Flush the monitoring system to prime with normal saline (Refer to flush policy for preparation of continuous flush system).

E. Connect the transducer to the monitor with the cable. Zero the transducer at the level of the patient’s bladder. (Refer to procedure for zeroing calibration of transducer)

V. **PROCEDURE:**

A. Explain the procedure to the patient/family.

B. Clamp drainage tube of the Foley (bladder) catheter with Hemostats.

C. Cleanse the Foley sideport with CHG swab.

D. Connect the pressure system to the sideport of foley.

E. Apply Luer Lock syringe (size at discretion of the physician) to the stopcock.

F. Turn stopcock off to patient and fill syringe with closed pressure system. Turn stopcock off to NSS bag and open to syringe.

G. Clamp foley distal to catheter and drainage bag.

H. The R.N. will push NSS into the bladder using the sideport (no more than 25ml, unless specified by the Physician).

I. Obtain measurement after instillation and at end expiration. Document in the electronic medical record under Critical Care Vital Signs Intervention.

**Suggested Parameters are:**

- **Grade I:** 12 – 15 mm Hg
- **Grade II:** 16 – 20 mm Hg
- **Grade III:** 21 – 25 mm Hg
- **Grade IV:** >25 mm Hg
- *>20 considered abdominal compartment syndrome*

F. Reposition patient to appropriate position for the patient’s condition.

G. Remove clamp from foley to ensure the flow of urine.
H. Physician performing bladder pressure monitoring will provide post procedure orders.

I. Refer to attachment Figure 106-1 – Figure 106-2.

*(Reference: Abdominal Compartment syndrome removed from www.uptodate.com 1-14-2014)

Bladder Pressure Monitoring Setup

**Figure 106-1** Bladder pressure monitoring setup. *(Illustration by John J. Gallagher.)*

![Diagram of Bladder Pressure Monitoring Setup]

**Figure 106-2** Correct position of the transducer for bladder pressure measurement. *(Illustration by John J. Gallagher.)*

**The correct transducer position at the iliac crest in the mid-axillary line in the supine position and with head of bed elevation.**

**EQUIPMENT**

- Nonsterile gloves
- Cardiac monitor and pressure cable for interface with the monitor
- 500- or 1000-mL intravenous (IV) bag of normal saline (NS) solution
- Pressure transducer system, including pressure tubing with flush device, transducer, and two stopcocks
- 25-mL Luer-Lok syringes

- Clamp
- Chlorhexidine swab sticks

**PATIENT AND FAMILY EDUCATION**

- Explain the procedure of bladder pressure measurement and its purpose to the patient and family. **Rationale:** Patient and family anxiety may be decreased. Understanding