Intra-abdominal Hypertension (IAH)/ Abdominal Compartment Syndrome (ACS) – MD Protocol

Desired outcome: Reduce the morbidity and mortality associated with IAH/ACS

Purpose: Early diagnosis and intervention for IAH/ACS.

- IAH/ ACS are two conditions on the same spectrum
- IAH is common in ICU patients
- It is associated with significant morbidity and mortality
- **Early recognition and early intervention are crucial!!**

0 -5 mmHg	***Normal***
5 -10 mmHg	***Common in critically ill patients***
12+ mmHg	***IAH***
15-20 mmHg	***Dangerous IAH – institute medical management***
20+ mmHg	***With new or progressive organ failure is considered ACS***

- Diagnosis:
  - IAH/ACS can effect all organ systems –
    For example,
    - renal; low uop
    - GI – ileus, non tolerance of tube feeds
    - cardiac – decreased venous return can lead to HD instability
  - Physical exam is an **unreliable indicator** of IAH/ACS
  - Clinical signs only show up late in clinical course (once ACS occurs)

- Monitoring early (not waiting for clinical signs) in all high risk patients allows early detection and **early intervention**.

- Bladder pressure is the gold standard for measurement of IAP
  - Any patient with 2 or more risk factors should have baseline pressures and be measured at regular intervals as opposed to spot checks in high risk patients.

- Protocol (**see nursing protocol**)
  - All patients with **2 or more risk factors for IAH/ACS** [1] will have:
    - A baseline bladder pressure on admission
    - Q2-4hrs thereafter while patient is being resuscitated, as outlined by protocol (see attached flow diagram).

    - **When bladder pressures >12mmHg, In-house burn resident on call will be notified**.

Once notified:

1. Examine patient – assure pt is not agitated, in pain - pt must have a relaxed abdominal wall.

2. If so, give analgesics, sedation or possible neuromuscular blockade (if on ventilator) and re-check bladder pressure within 30 minutes.

3. If bladder pressure remains >12 mmHg, call chief resident/fellow immediately for further direction.

4. Refer to IAH/ACS Medical Management and IAH/ACS Management Algorithm for further treatment options.

Risk factors for IAH/ACS[1]

1. Diminished abdominal wall compliance

Acute respiratory failure, especially with elevated intrathoracic pressure
Abdominal surgery with primary fascial or tight closure
Major trauma / burns
Prone positioning, head of bed > 30 degrees
High body mass index (BMI), central obesity

2. Increased intra-luminal contents

Gastroparesis
Ileus

Colonic pseudo-obstruction

3. **Increased abdominal contents**
   Hemoperitoneum / pneumoperitoneum
   Ascites / liver dysfunction

4. **Capillary leak / fluid resuscitation**
   Acidosis (pH < 7.2)
   Hypotension
   Hypothermia (core temperature < 33°C)
   Polytransfusion (>10 units of blood / 24 hrs)
   Coagulopathy platelets < 55000, PT > 15 sec, PTT > 2x normal, INR > 1.5
   Massive fluid resuscitation (> 5 L / 24 hours)
   Pancreatitis
   Oliguria
   Sepsis
   Major trauma / burns
   Damage control laparotomy