

INTRA-ABDOMINAL HYPERTENSION (IAH) ASSESSMENT ALGORITHM

- Patients should be screened for IAH/ACS risk factors upon ICU admission and with new or progressive organ failure.
- If two or more risk factors are present, a baseline IAP measurement should be obtained.
- If IAH is present, serial IAP measurements should be performed throughout the patient's critical illness.

Patient has TWO or more risk factors for IAH/ACS upon either ICU admission or in the presence of new or progressive organ failure

Measure patient's IAP to establish baseline pressure

IAP measurements should be:

1. Expressed in mmHg (1 mmHg = 1.36 cm H₂O)
2. Measured at end-expiration
3. Performed in the supine position
4. Zeroed at the iliac crest in the mid-axillary line
5. Performed with an instillation volume of no greater than 25 mL of saline [1 mL/kg for children up to 20 kg] (for bladder technique)
6. Measured 30-60 seconds after instillation to allow for bladder detrusor muscle relaxation (for bladder technique)
7. Measured in the absence of active abdominal muscle contractions

Sustained IAP \geq 12 mmHg?

YES

NO

Patient has IAH

Patient does not have IAH

Notify patient's doctor of elevated IAP.
Proceed to IAH / ACS management algorithm.

Observe patient.
Recheck IAP if patient deteriorates clinically.

Risk Factors for IAH / ACS

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 / mm³ OR prothrombin time (PT) > 15 seconds OR partial thromboplastin time (PTT) > 2 times normal OR international standardised ratio (INR) > 1.5)
 - Massive fluid resuscitation (> 5 L / 24 hours)
 - Pancreatitis
 - Oliguria
 - Sepsis
 - Major trauma / burns
 - Damage control laparotomy

IAH Grading

Grade I	IAP 12-15 mmHg
Grade II	IAP 16-20 mmHg
Grade III	IAP 21-25 mmHg
Grade IV	IAP \geq 25 mmHg

Abbreviations

IAH - intra-abdominal hypertension
ACS - abdominal compartment syndrome
IAP - intra-abdominal pressure

Adapted from *Intensive Care Medicine* 2006;32(11):1722-1732 & 2007;33(6):951-962
© 2007 World Society of the Abdominal Compartment Syndrome. All rights reserved.



World Society of the Abdominal Compartment Syndrome (WSACS)

ZNA Stuivenberg, Lange Beeldekenstraat 267, B-2060 Antwerpen 6, Belgium
Tel: +32 3 2177092 Fax: +32 3 2177279 e-mail: info@wsacs.org
Website: <http://www.wsacs.org>