Management of Pelvic Fracture I (Bleeding, Resuscitation, Stabilization)

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Disclosures

None

Learning Objectives

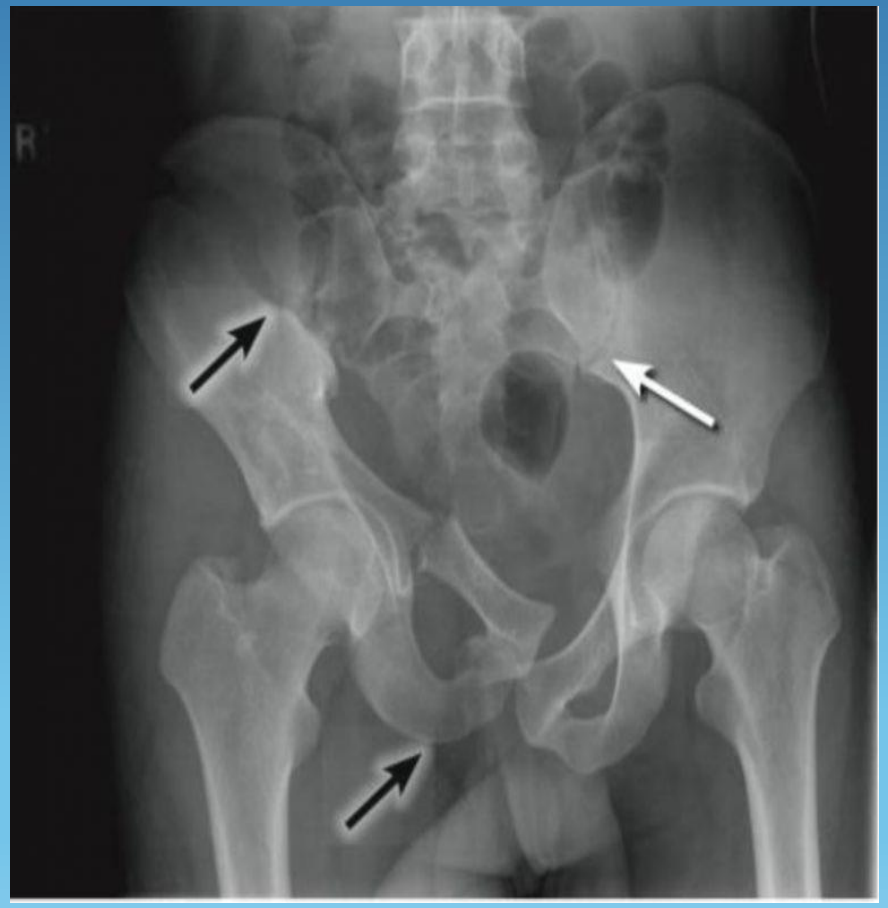
Identify	Identify which fractures need pelvic binders
Identify	Identify which fractures need intervention to stop bleeding
Discuss	Discuss massive transfusion for pelvic fractures
Review	Review the anatomy of the pelvis

Pelvic Fractures

These kill patients if not taken seriously…….point blank

What are the Wisniewski Rules of Pelvic Fracture management?		
1. Close down the pelvic ring if open book pelvis	2. Transfuse blood products	3. Surgical Control of ongoing Bleeding (source control)

Which needs a pelvic Binder?



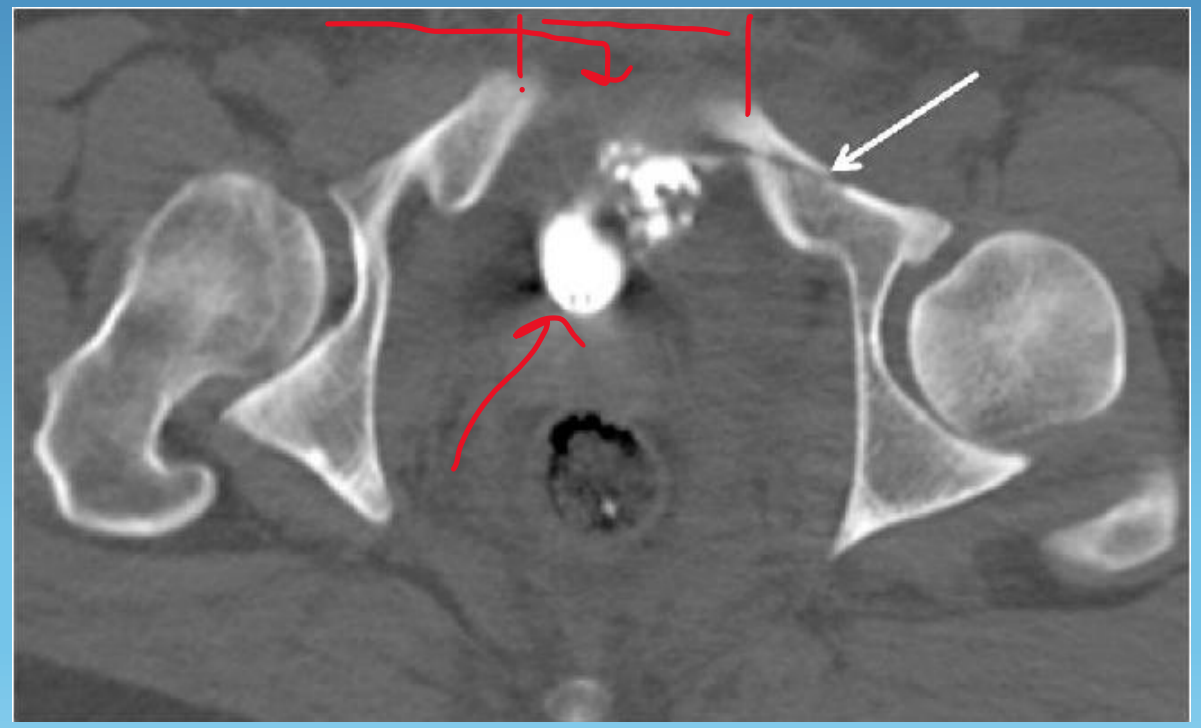
Resuscitation

Pelvic fractures need 1:1:1 transfusion

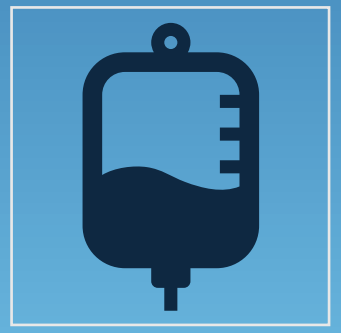
Transfuse early and be aggressive

- If you fall behind then the patient will become coagulopathic
- Remember after every 4 units of blood to give 1 gram of Calcium
- TXA 1 gram or 2 grams within 3 hours of injury
- Establish central venous access and A-line early
- End point goals SBP > 100 mm HG, BE < -4, HgB>8 g/dl. Stable BP without need for ongoing transfusions.

Active Pelvic Arterial Bleeding



Stopping Arterial Bleeding



Is the patient stable? with/without transfusion?

If stable consider:

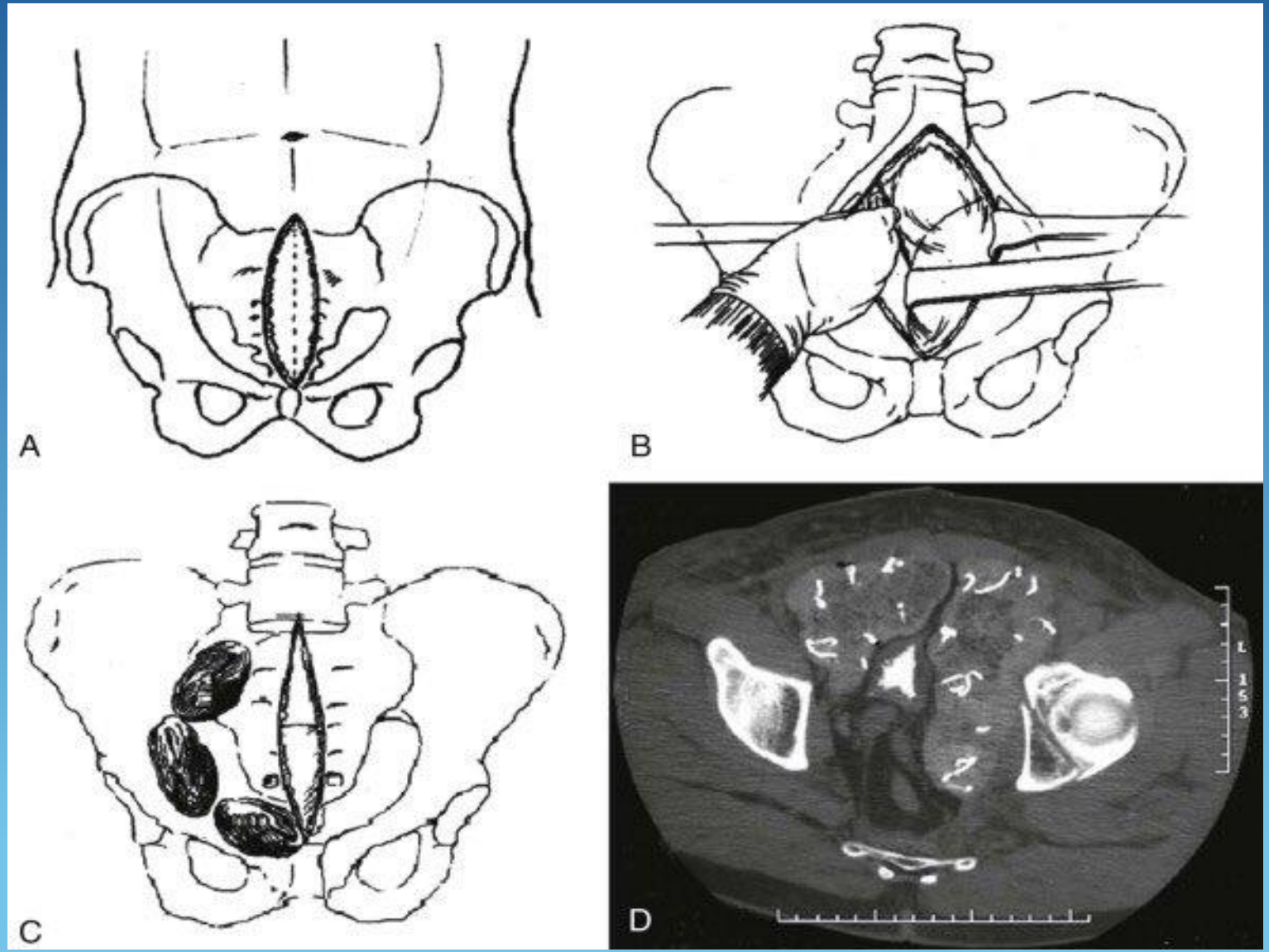
Interventional Radiology to embolize selectively or take out entire interal iliac system.

- Risk of gluteal necrosis with embolizing bilateral Internal iliac vessels
- Risk of impudence in men

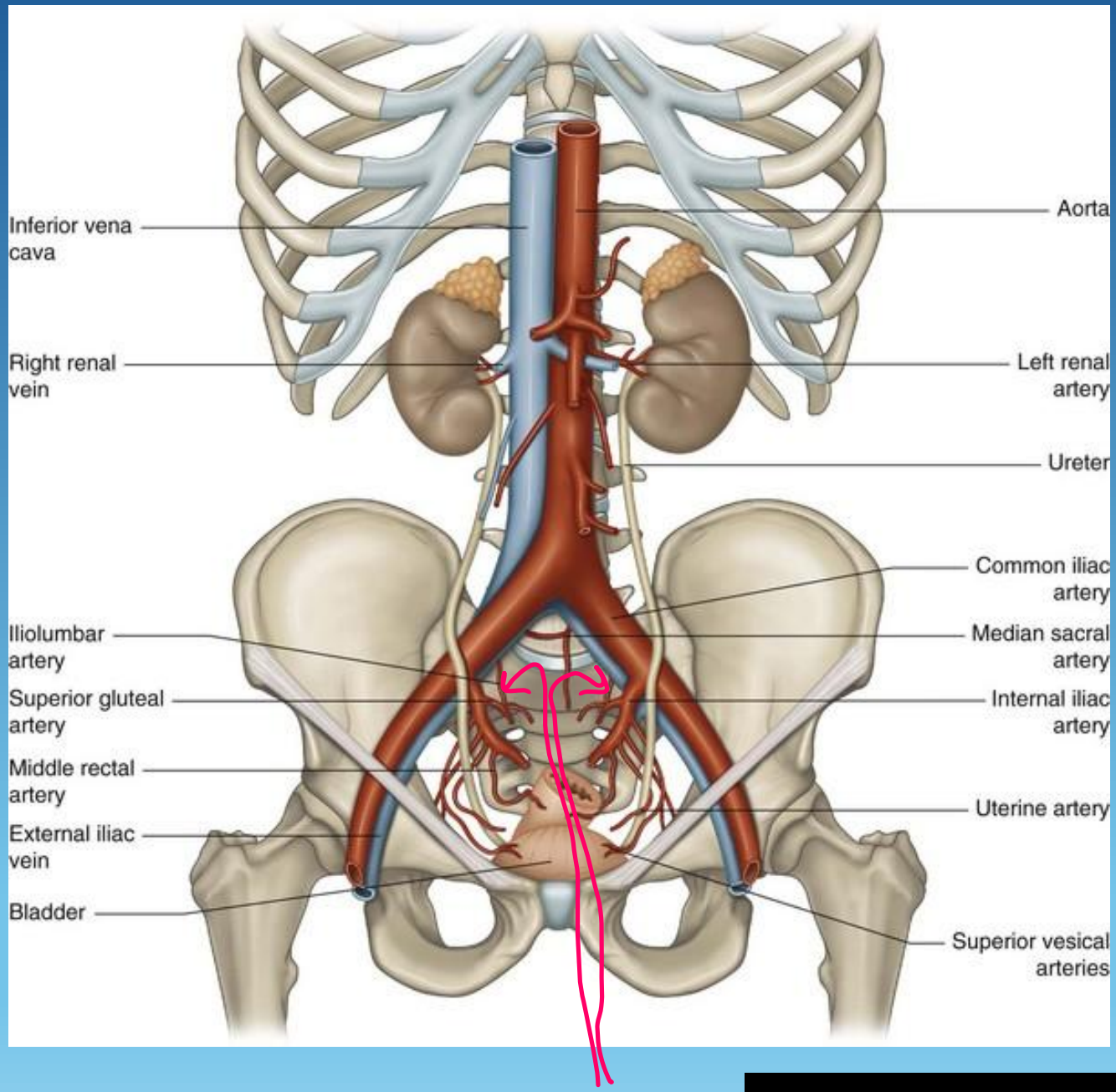
Surgical Options

- If Unstable need to consider surgical options
  - 1. Exploratory laparotomy with internal iliac artery ligation
  - 2. pre- peritoneal packing
  - 3. Exploratory laparotomy with either number 1 or number 2 or just pelvic packing.

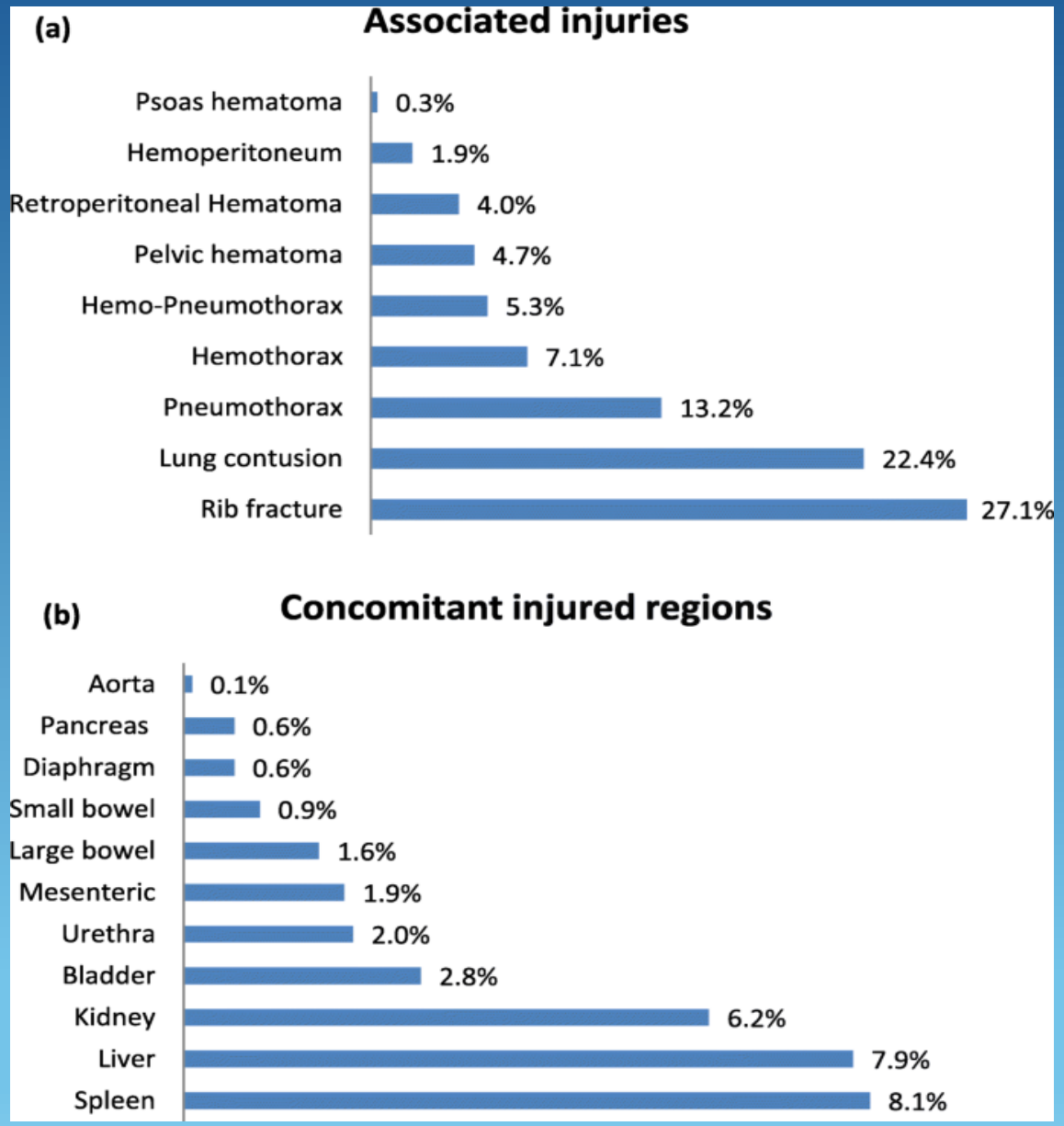
Preperitoneal packing



Internal Iliac Artery Ligation



What else to think about with Pelvic Fractures?



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Pelvic Bleeding

It is estimated that 85% of pelvic fracture–related bleeding is due to venous and soft tissue bleeding. It is a low-pressure bleeding and will fill the space it is given. Thus, stabilization of the bony pelvis will help limit the space and facilitate early tamponade of the bleeding

In unstable pelvic ring fractures, a blood loss of approximately 9 to 15 units of blood must be expected

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