Acute Management Of Pelvic Fractures

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Emergent life-saving treatment is required for high-energy pelvic fracture with associated hemorrhage and hemodynamic instability. Mortality rates in hemodynamically unstable patients with high energy pelvic fractures are 18% - 40% and are even higher when the patients are not treated in an experienced center that uses a standard protocol. Survival chances are greatest if patients are directly referred to a trauma center with a multidisciplinary team that uses a standard protocol for treatment. Protocols should focus on stopping hemorrhage, managing trauma induced coagulopathy, identifying associated injuries, and restoring hemodynamic stability. Active involvement of an experienced Orthopaedic surgeon in the evaluation and care of these critically injured patients is essential.

Life-saving treatment can be started immediately using pelvic binders or sheets to which provide pelvic reduction and tamponade. Taping the feet together can also help reduce any pelvic external rotation deformity.

Fractured bony surfaces and lacerated veins cause retroperitoneal low pressure bleeding in all cases. Because only a small percentage of cases are associated with arterial hemorrhage, retroperitoneal pelvic packing may be more beneficial than angiography. Pelvic packing, popularized in Europe, is now increasing used in certain North America centers. It is rapid and an effective means to address the main source of hemorrhage in most high-energy pelvic fractures.

External pelvic fixation can be rapidly applied to reduce the pelvic volume and provides temporary fracture stabilization. This can usually be a simple anterior frame with 1 or 2 pins in the anterior iliac crest. The use of a pelvic A massive transfusion protocol should begin on patient arrival. Packed red blood cells, platelets and plasma should be transfused in a 1:1:1 ratio. Aggressive crystalloids fluid resuscitation may be counterproductive as it can cause continued bleeding due to increased intraluminal pressure at the fracture site and exacerbate coagulopathy.

If the blood pressure does not respond after the initial 2 units of packed red blood cells we take the patient immediately to the operating room for a simple external fixator and retroperitoneal pelvic packing.