Injury Severity Score

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An Injury Severity Score (ISS) (see Chapter 26) >15 predicts mortality in adults, but children require an ISS >25 for the same prediction; this is because most children have an isolated head or extremity injury . Only around 10% of children have multiple injuries. /uni25CF Head : in a neonate, the fontanelle or ‘soft spot’ may not have closed, leading to a bony space that could be confused with a fracture. A bulging fontanelle may suggest raised intracranial pressure, whereas a sunken fontanelle is seen in hypovolaemia. /uni25CF Chest : a child’s rib cage is very compliant and ribs may bend and recover rather than break, leading to lung con - tusions or mediastinal injuries without fractures. If diag - nosed clinically , a tension pneumothorax need not be confirmed with a chest radiograph before needle thoraco - centesis and placing a chest drain. Although uncommon, cardiac tamponade should be considered and requires an emergency subxiphoid needle pericardiocentesis; a limited echocardiogram may confir m the diagnosis. /uni25CF An emergency department clamshell thoracotomy should be performed for penetrating chest injury where the patient had a witnessed arrest within the last 15 minutes. An incision is made across the chest in the fifth intercostal space. It may be possible to cut the sternum with scissors rather than needing a Gigli saw . The pericardium is opened, blood removed and bleeding controlled. A hole in the heart can be oversewn, taking care to avoid the coronary vessels. If the bleeding appears to be from lung, the lung can either be rotated 180° (lung twist) or the hilum slooped. The aim is not to perform a definitive repair but to buy time, allowing resuscitation, including internal massage until - cardiac output returns. The clamshell thoracotomy also allows compression of the aorta just above the diaphragm to aid vascular filling. protected by the rib cage than they are in adults and are at greater risk of injury from blunt trauma. Signs may be subtle, and tenderness should be investigated with cross-sectional imaging. If there is significant abdominal bleeding, aortic compression may be helpful, and this may be easier to achieve through a thoracotomy than a laparotomy; it can be challenging to reach the aorta above the liver. /uni25CF Extremities : in comparison with adults, children’s bones are more compliant /uni00A0 – /uni00A0 they may bend or fracture one cor tex. Children’s bones also remodel as they grow; there fore, the position of an angled distal limb fracture may be accepted in a child when it would be manipulated in an adult. The growth plates in children ar e not yet fused and a fracture involving the growth plate can limit future limb growth /uni00A0 – /uni00A0 these fractures should be referred to a paediatric orthopaedic surgeon. Injury Severity Score

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