Approach to an injured child

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Learning objectives

1. Understand how to approach an injured child to identify injuries.
2. Recognise, assess and manage life threatening injuries.

Initial assessment

Examination (ABCDEs):

1. **Airway and immobilise cervical spine:** Make sure airway is open. The easiest way is to see if the patient can talk. Deal with any airway problems immediately, use suction if needed. Employ jaw thrust and chin lift, oropharyngeal airway, intubate if required.
2. **Breathing:** Observe respiratory rate and oxygen saturation. Expose and inspect chest for external signs of trauma, asymmetrical chest movements. Palpate chest for crepitus or surgical emphysema. Percuss and auscultate for air entry bilaterally and added sounds. Administer face mask oxygen, intubate and ventilate, perform needle thoracotomy, intercostal drain as needed.
3. **Circulation:** Assess pulse rate, blood pressure, capillary refill and the warmth of peripheries. Look for signs of bleeding, especially chest, abdomen, retroperitoneum, pelvis and long bones. Control any major external bleeding with direct pressure. Manage shock, insert two large bore (at least 16 gauge) intravenous cannulas. If this cannot be rapidly achieved, obtain intraosseous access. (anterior medial tibia). Start IV fluid resuscitation if in shock, transfuse blood if needed. Consult a trauma surgeon if surgical intervention is required for shock.
4. **Disability:** Assess GCS (Glasgow Coma Scale) pupil size and responsiveness. Assess gross motor and sensory function in all four limbs. If you suspect a spinal injury, a full neurological assessment is vital at the earliest opportunity. Check for priapism, loss of anal sphincter tone and the bulbocavernosus reflex. Check blood glucose.
5. **Expose the patient:** Log-roll the patient. Examine the back of the head, back, buttocks and axilla. Then cover and keep the patient warm.
6. **Secondary survey:** A secondary survey is carried out after the primary survey and immediate management of potentially life-threatening injuries to identify all other injuries. Perform a systematic head-to-toe examination, including head, face, neck, chest, abdomen, pelvis and extremities. Look for deformities of limbs that may indicate fractures, examine for any open wounds around the fracture. Examine the neurovascular status of the injured limb and exclude compartment syndrome.

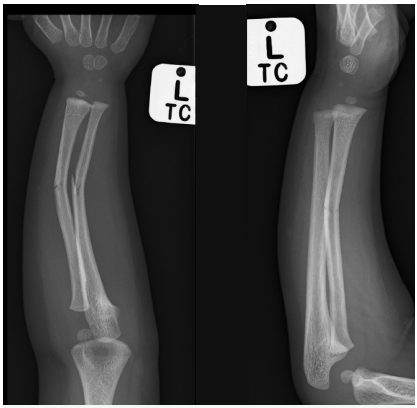
History (AMPLE):

1. **A**llergies
2. Current **M**edications
3. **P**ast medical history
4. **L**ast meal
5. **E**vents leading to injury

Special investigations

If there is an isolated injury of the arm with suspected fracture, an X-ray of the affected limb, including the joint above and below the injury is most appropriate. Depending on other injuries, further X-rays or CT scans may be needed.

Example



(A: AP view & B: lateral view)
Radius and ulnar greenstick fracture

Management

- **Non-surgical:** Appropriate management of the fracturewould be a reduction and the applicationof plaster of Paris as a splint.
- **Pharmacological:** Adequate analgesia is important.
- **Surgical:** Depending on the specific fracture, surgery may be indicated.

Post-reduction X-rays