T.I.G.E.R.

#8 Paediatric Handlebar Injuries

A recent national patient safety notice highlighted the management of handlebar injuries (HBI) associated with major internal injuries in the paediatric age group. This advice relates to all types of HBI including bicycles, scooters and electronic scooters. This advice has been prompted by significant intra-abdominal injuries that have been missed. Significant injuries may be missed particularly in early presentations after suffering HBI. There should be a low-threshold for surgical review, computed tomography (CT) imaging and/or admission for observation in paediatric patients presenting with HBI.

Situation

- Paediatric patient sustaining a HBI to the abdomen.
- Trauma patient in the Emergency Department Resuscitation Area.
- Trauma team members trained in Advanced Trauma Life Support (ATLS).
- Team leader assigns roles to team members.
- Activation of the major haemorrhage protocol if appropriate.
- Handover from the ambulance/paramedic team including mechanism of injury and pre-hospital observations/interventions.

Patient

- The patient should undergo rapid assessment of Airway (including ROCSM) and Breathing (including ventilation) by an appropriate team member.
- There should be rapid assessment of Circulation (with haemorrhage control, if indicated) by an appropriate team member.
- Significant intra-abdominal injuries (pancreas, liver, spleen and bowel) should be considered in any paediatric patient presenting with a HBI.
- A high index of suspicion is important if there is significant pain, abdominal tenderness, peritonism, vomiting, bruising or abnormal physiology present.
- Timing of presentation is important as, if the patient has presented early, significant clinical signs may not be present at that point.
- This particular injury pattern is more likely to involve major intra-abdominal trauma compared to other mechanisms involving bicycles.

V 1.0 Review date: Dec 2026

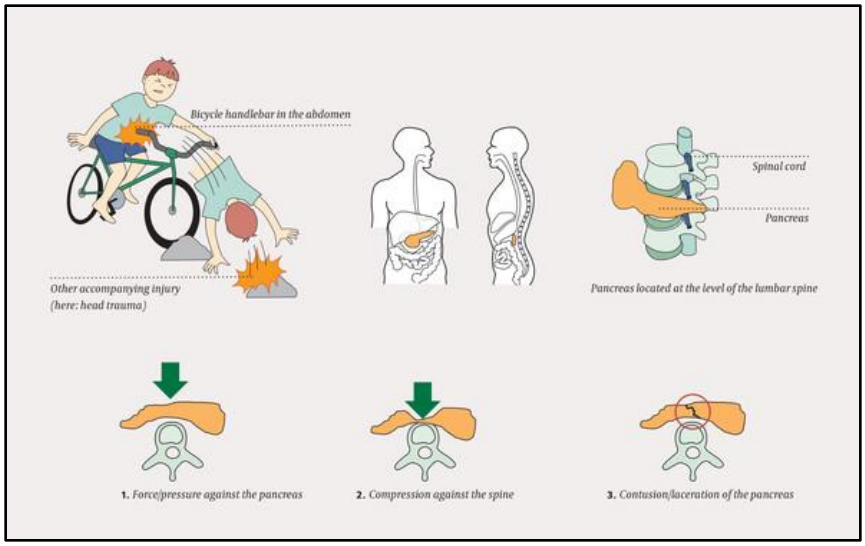

Figure 1 – Pancreatic injury in children resulting from an HBI. The pancreas is pressed against the spinal column, resulting in compression and contusion of the tissues and in some cases injury to or a tear in the pancreatic duct.

Management

- Careful consideration should be given to effective pain management.
- There should be a low-threshold for surgical review, computed tomography imaging and/or admission for observations in paediatric patients presenting with this mechanism of injury.
- If the patient is reviewed in a minor injuries department, the case should be referred to the Emergency Department.
- When routine bloods are taken, this should include lipase levels, on the understanding that a normal level DOES NOT exclude pancreatic injury.
- Traumatic pancreatic injuries often present late and therefore if the mechanism of injury suggests this as a possibility, then the patient should be admitted for observation.
- Proven traumatic pancreatic injuries should be managed by a major trauma and/or HPB surgeon.
- **Have a low threshold for referral to MTC and discussion with HPB if normal CT scan but unexplained pain.**

Ongoing observation

- If imaging reveals no major injury and the child is clinically stable, it may still be appropriate to observe for 12–48 hours
- Discharge is possible after this period if the child remains stable, pain improves, and there are no new findings on serial exams.
- **Safety netting is of utmost importance.**
- Further advice from RCEM can be found by scanning this QR code.

Refer

ALL PAEDIATRIC REFERRALS TO THE ROYAL LONDON HOSPITAL SHOULD COME VIA THE MAJOR TRAUMA CENTRE

Please do not refer directly to paediatrics

- IEP any images to The Royal London on blue light
- If transfer to the MTC is agreed, move the child to an appropriate, safe clinical area whilst arrangements are made
- Plan for transfer including:
  - Appropriate clinical accompaniment
  - Essential drugs and equipment

References

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