Non accidental and neglectful injuries in children: Patterns and typology

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Non-accidental injury...

- NAI (physical abuse or battery) includes injuries that result from deliberate actions against a child or a failure to prevent injury (Thomas 2016)

- Non-accidental acts of physical force by a child’s parent/caregiver that result, or have potential to result, in physical harm to a child or which evoke significant fear (Slep et al 2015, proposal for ICD-11)
• NAI is suspected for >10% of death in children <12m
• #1 cause of death is head injury
• 60% of cases with previous history or clinical evidence of maltreatment
• 22% with involvement of child welfare agencies
• 32% with misdiagnosis
  - Viral gastroenteritis or influenza
  - Sepsis
  - Accidental head injury
Consequences of NAI

- Death
- Disability – mental, cognitive, physical
- Scars
- Disfigurement
- PTSD
- Behavioural, physical, emotional
Is maltreatment the cause of the alerting feature?

• Consider: maltreatment is one of a range of explanations
• Suspect: a serious level of concern, but not proof
• Unsuitable explanation: implausible, inadequate or inconsistent
  – Presentation
  – Age and stage
  – Normal activities
  – Child v parental account
  – Between carers
  – Variation over time
Failure to recognise NAI

- Concern about missing a treatable disorder
- Fear of losing a positive relationship with family
- Discomfort of disbelieving/suspecting/wrongly blaming
- Divided duties between adult and child and breaching confidentiality
- Understanding why the maltreatment occurred and was not intentional
- Losing control/lack of confidence in child protection system
- Stress
- Personal safety
- Fear of complaints
The study

• Retrospective case note review all paediatric NAI over five year period
• Phase One – develop typology (n=100, 72 random useable)
• [Phase two – hotspot mapping (n= 2000)]
• Protocol approved Integrated Research Application Services (IRAS)
• Sponsorships, approvals
• Team - Staff development project
  – Winter pressures
  – Case note restrictions – 20 sets/archives
  – Porters and stairs
Causation

• Abuse
• Neglect
• Fabricated and induced illness
Head injuries

- Abusive head trauma
- EDH
- Skull fractures
- SDH
- Retinal haemorrhage
Mechanism of Injury
Skeletal fractures

- Ribs
- Clavicle
- Scapular
- Vertebral
- Metaphyseal
- Fingers
- Multiple
- Burns
- Scalds
- Acids

- Thorax
- Abdomen
- Kidneys
- Liver
- Spleen
Cold injuries

- Swollen red hands or feet
- Hypothermia

Ingestions and poisonings

- Bleach
- Methadone
- Drugs
- Salt
- Bites
- Lacerations
- Bruises
- Periorbital
- Intraoral

- Non-fatal submersion
- Out of hospital cardiac arrest
- Strangulation
- Apparent life-threatening events
Head trauma
Skeletal fractures
Thermal injuries
Visceral Injuries
Cold injuries
Ingestions and poisonings
Soft tissue injuries
Asphyxiations and cardiac arrests
Phase one findings

- Disabilities not recorded
- Ethnicity not recorded
- PICU have more fatalities
- Earlier cases ‘gappy’
- Child protection concerns noted...but what?
- Grey areas for neglect injuries with age
- Big families – assumptions someone is watching
- We don’t ask about domestic abuse
All case Birmingham
2011-2016
Discussion

• Non-accidental or intentional?
• Role of neglect
• Malnutrition
• Out of hospital cardiac arrest
• FGM
• Self-harm
• Sexual trauma
• Omission v commission
• Sentinel injuries
• Mimics of inflicted injury