Epistaxis OR oral bleeding in infants < 2 years (with or without BRUE)

Author: Dr F Howsam, Dr L Perera
Publication date: March 2022, Version 3
Review date: March 2024

See also: BRUE / oral injury under 3 years / subconjunctival haemorrhage

Background

- Facial blood from the nose or mouth in infancy is very rare (12.6 per 100,000 annual incidence for hospital admissions <1yr, 31 per 10,000 in children < 2yrs).
- Recognised causes in babies are:
  - Coryza / URTI
  - accidental trauma
  - coagulation / platelet disorder.

  1/3 of cases the cause remains unknown.
- **There is an ***association*** between suffocation / sudden airway obstruction, and appearance of subsequent blood-stained fluid from nose or mouth.**

Literature

Covert video surveillance data from Southall et al (n=8) found epistaxis in a third of children asphyxiated. Systematic Review (2016 n=104 children) suggests that between 7-24% of children < 2yrs presenting with epistaxis, in the absence of trauma or medical causes, have been asphyxiated. This could be accidental (co-sleeping) or intentional. **Systematic review states: epistaxis in this age group does not constitute a diagnosis of asphyxia, but any infant presenting with unexplained epistaxis needs a thorough evaluation.** Clinical features of asphyxiation are variable- tachycardia / bradycardia, acidosis, apnoea, respiratory distress mottling and delayed CRT have been described in case reports.

Assessment

Approach to Child < 2years with bleeding from nose or mouth

History

- Was it bubbly / frothy blood stained fluid (?pulmonary haemorrhage) due to airway obstruction (medical or induced) – CXR advised
- ?Haematemesis - history of vomit. Think: Liver / GI or swallowed epistaxis
- ?Haemoptysis –cough / DIB ?CXR and investigate
- Breast fed babies - check mum's milk for blood (ask to express) together with evidence of mum's nipples having active cracks or bleeding (Vitamin K deficiency can present with bleeding – investigations advised).

  Remember: cracked nipples are very common, blood from the mouth is not
- Any witnessed injury or signs of trauma? Any recent URTI?
- Ask about sleeping arrangements, bedding, events before and after, who was at home
- Did a BRUE occur (change in colour, tone, breathing cessation)?

- Ask about family history of bleeding disorder - bleeding from immunisations / dental work, heavy periods, postpartum haemorrhage, bleeding after cord cut, Vit K (IM)?
- Full social history

Management

ORAL / NASAL blood in the absence of a clear medical cause (± BRUE) necessitates:

1. Bloods: FBC, LFTS, clotting screen, vWF assay

2. Senior paediatric review with head to toe examination to include skin surfaces, mouth and frenum, and check head circumference.

3. Examination by ENT (please show this guideline to them) (but to remain under the care of paediatrics).

In the absence of a clear history of witnessed accidental trauma, obvious URTI (clearly snotty) or coagulopathy:

4. Explanation to parents as to rarity of oronasal blood in this age-group and admit to ward in order to achieve the following:

- Information sharing with social care
- Low threshold for multiagency discussion and further CP investigation. You may need to provide the systematic review.
- LOW THRESHOLD (particularly in the <1s) for: Ophthalmology review, skeletal survey, CT head for occult abuse. **If there is a history of unexplained collapse or apnoea you are strongly advised to perform occult screening, in line with recommendations.**

5. If no cause for epistaxis found, alert GP / HV to epistaxis having occurred.

References

1. A prospective study of the incidence and aetiology of nosebleeds in infants – final report. Paranjothy et al. WPSU Annual Report 2010;19-21
2. The epidemiology of oro-nasal haemorrhage and suffocation in infants admitted to hospital in Scotland over 10 years. McIntosh et al. Arch Dis Child 2010; 95 (810-6)
3. When to Suspect Child Maltreatment. NICE 2017 https://www.nice.org.uk/guidance/cg89/chapter/1-Guidance
4. Systematic Review. Probability of asphyxia in < 2 years children. Rees, Kemp , Maguire eta l J Pediatr 2016;168:178-84
5. https://www.rcpch.ac.uk/sites/default/files/2021-07/Child%20Protection%20Evidence%20-%20ENT.pdf