On discussing with the parents immediately after theatre, they were unaware of any button battery operated devices in the home.

The patient continues under regular ENT follow up, having developed a septal perforation, and review by Paediatric Plastic Surgery service was also arranged in anticipation of any future intervention that may be needed if nasal growth is affected.

Case Presentation
A 2 year old boy presented to the ED with a foreign body in his nose. The foreign body insertion was un witnessed, but the parents noted pen with a missing nib before bringing him to hospital. ED doctors visualised a pen nib in the nostril, but attempts at removal failed. ED referred the patient to ENT for removal in theatre, as the nib had embedded into the septum and removal attempts were causing bleeding and pain. The patient was NBM waiting for theatre until late in the evening. As the emergency list was still busy, the child was allowed to be fed, and theatre was planned for the next day.

The initial attempt to remove the foreign body in the anaesthetic room was difficult. There was poor visualisation due to what was thought to be dried blood and ink debris. Once debris was cleared in theatre, the metallic foreign body was only then recognised as a button battery. There was extensive local damage from local pressure and tissue necrosis as well as the effect of the electrochemical damage to the mucosa.

Case Review
After departmental review of the case, one management aspects discussed was the recognised practice of avoiding radiography in young children and infants. In view of this we completed a literature search

Method

Literature search: • ‘Button Battery’ (+/- synonyms) • Nose or ear, NOT trachea, NOT oesophagus • LIMITATIONS: last 10 years; English Language; children

Results

15 abstracts identified. All papers reviewed. No comments related to aural button batteries. 8 directly commented on use of X-Ray in relation to button battery cases.

Discussion

The aim of this work is to assert the importance of 'low threshold' of suspicion for button batteries in un witnessed foreign body insertion. Abou-Elfadel et al. all 8 it that only 38% of paediatric foreign body insertions occur in the presence of an adult. In another report on foreign bodies presenting to the ED by Glynn et al, 3 out of 44 foreign bodies were button batteries, unrecognised as such until extraction in theatre. These experiences directly reflect the outcome of this case report and re-iterate the message that there must be a low threshold for susp ecting button battery in un witnessed foreign body insertion and/or any suspicion of metallic foreign body.

Plain film X-ray is a useful and justifiable investigation in these circumstances. It is recognised that radiography in young children and infants is avoided in view of risks associated with childhood exposure to radiation. However this risk-benefit balance must be assessed for each individual case. A change in practice will lead to more plain film x-ray for suspecting button battery in unwitnessed foreign body insertion and/or any suspicion of metallic foreign body.

If foreign body is un witnessed or not visualised on anterior rhinoscopy, recommend ideal of nasoendoscopy, however, imaging with lateral XE, CT or MRI may be necessary in ‘some cases’.

Conclusion

• Urgent removal must occur for button battery insertion regardless of site.
• Recognition of button batteries is the key step in achieving this.
• Therefore early plain film X-Ray should be justified in:
  • un witnessed foreign body insertions
  • suspected metallic foreign bodies
  • disproportionate discharge or pain

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xiv. Reviewing doctors should consider nasal x-ray examination.

The Unknown Foreign Body – A Case Report and Review of Management in Non-Oesophageal Button Battery
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AUTHOR Paper Reference Key Comment
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Plain X-ray successfully detected button battery. Importance of distinguishing coin from battery.
Recommend a plain radiograph in all children presenting with a nonvisible foreign body or unilateral nasal discharge.
X-rays are only worthwhile as evidence to expedite theatre access.
Recommended X-rays of un witnessed/unknown nasal foreign body (Water’s view and lateral views) in view of recognising delays when assume simple foreign body (e.g. coin).
Suggests X-ray evaluation in negative examination and/or un witnessed foreign body insertion.
Recommend X-ray for purulent discharge or un witnessed foreign body, especially if anterior rhinoscopy is difficult or inconclusive.
If foreign body is un witnessed or not visualised on anterior rhinoscopy, recommend ideal of nasoendoscopy, however, imaging with lateral XE, CT or MRI may be necessary in ‘some cases.’

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