

Loom bands and young children – a tragedy waiting to happen?

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Abstract

Background: There has been a surge in the popularity of loom bands amongst children in recent months. These small rubber bands, which can be woven together to make colourful bracelets and necklaces, have become the world's most popular toy. Foreign bodies in paediatric nasal and aural cavities are a common presentation to ENT units across the country. Whilst most are removed without incident, foreign bodies in nasal passages represent a potential risk for inhalation, leading to airway obstruction.

Method: This paper reports a case series of four paediatric patients who presented with a loom band associated foreign body in the nose over a 7-day period at a district general hospital in Scotland.

Conclusion: Although the four cases presented were resolved without the need for general anaesthetic, the ever-soaring prevalence and popularity of loom bands necessitates a degree of caution and vigilance from parents, retailers and manufacturers alike. We believe there is an urgent need for greater public awareness of their potential hazards.

Key words: Pediatrics; Foreign Body; Airway Obstruction

Introduction

We present four cases of paediatric patients with a loom band associated foreign body in the nose. The cases are reported in chronological order (according to the date of patient presentation). This follows a review of relevant cases that presented over a 7-day period at the ENT Unit at Monklands District General Hospital, Lanarkshire (Scotland, UK).

These cases are reported with a sincere aim to increase awareness of a potential epidemic of previously undescribed preventable morbidity in paediatric patients.

Case reports

Case one

A three-year-old girl presented to the accident and emergency department (A&E) with a foreign body in the nose, following the insertion of a banded finger into the nasal cavity. Various attempts at home and by staff in A&E to remove the loom band had failed, resulting in a particularly agitated and distressed patient. The band was surgically removed under local anaesthetic (xylocaine spray) using crocodile forceps and decongestants. Other than the emotional distress, the patient suffered no complications and was discharged.

Case two

A four-year-old boy presented to A&E with a foreign body in the nose. This boy had inserted the S-shaped hook used to complete loom band bracelets into his right nasal passage. Repeated attempts with decongestants, passive nasal cleansing and 'parent's kiss' manoeuvres had failed to enable visualisation of the hook; the difficulty in locating the hook was compounded by the transparency of the plastic. The hook was eventually visualised and removed under local anaesthetic using crocodile forceps by senior medical staff. The patient was discharged with minor nasal trauma.

Case three

A three-year-old boy presented to A&E with a foreign body in the nose. A colourful loom band was evident in his anterior left nasal passage. The foreign body was surgically removed with crocodile forceps without the need for anaesthetic.

Case four

A four-year-old girl presented to A&E with a foreign body in the nose. The tip of a translucent S-shaped hook was visible deep within the right nasal passage; however, it could not be removed. The use of decongestant spray, combined with the child's distress,

caused partial inhalation into the posterior nasal passage, and the hook could no longer be visualised directly.

Whilst awaiting senior medical review, the patient was observed to choke. This was followed by transient dysphagia. Clinical examination, which included visualisation of the entire nasopharynx, was unremarkable. It was assumed that the patient had ingested the foreign body. The patient was observed for a short period on the ward before being discharged.

Discussion

Made popular by the likes of David Beckham and the Duchess of Cambridge, loom bands have seen an incredible surge in popularity, becoming the 'world's most popular toy'.¹ As of 10th July 2014, all the top 20 (and 37 of the top 40) bestselling toys on Amazon.com (the online retailer) were loom band or loom band related.

Originally invented in 2011, the small rubber bands (Figure 1) are woven together to make colourful bracelets (Figure 2), necklaces and other wearable items. The bands are sold in packs; the packs contain hundreds or thousands of the colourful bands and translucent S-shaped hooks (Figure 3), the latter of which are used to complete the items made.

Whilst the toy's original creator (Rainbow Loom[®]) states that the product has been tested in accordance with US Toy Safety standards, its acknowledgement of the potential hazards associated with the toy is limited to a small graphic, which reads 'Warning. Small Parts. Not Suitable for Children under 3 years.' As of 10th July 2014, there was no acknowledgement of this hazard on the company's website; however, the company does show a 'Special Alert' on every page regarding counterfeit products.

This case series is described following several recently reported health warnings of incidents involving loom bands. In Lincolnshire, a seven-year-old boy was left temporarily blinded after an accidentally

'pinged' loom band caused traumatic haemorrhage in his left eye.² Warnings have also surfaced after children in Lincolnshire³ and Bristol⁴ experienced compromised digital circulation after falling asleep with loom bands on their fingers.

Our concern with a foreign body in the nose is the potential risk that this foreign body is inhaled, causing foreign body airway obstruction. This risk is predominantly associated with extremes of age; prevalence of the condition is greatly increased in infants and small children. A study by Asif *et al.* reported that 77.8 per cent of paediatric tracheobronchial foreign body cases occurred in those aged less than 5 years; 16 per cent of such cases occurred in children aged between 5 and 15 years, and 6.2 per cent occurred in those aged over 15 years.⁵

Common complications of inhaled foreign bodies range from signs of respiratory distress, including cough, dyspnoea, and wheeze or stridor, to pneumonia, bronchitis, bronchospasm, pneumothorax and odynophagia. The incidence of inhaled foreign bodies was



FIG. 1
A loom band.



FIG. 2
A loom band bracelet.

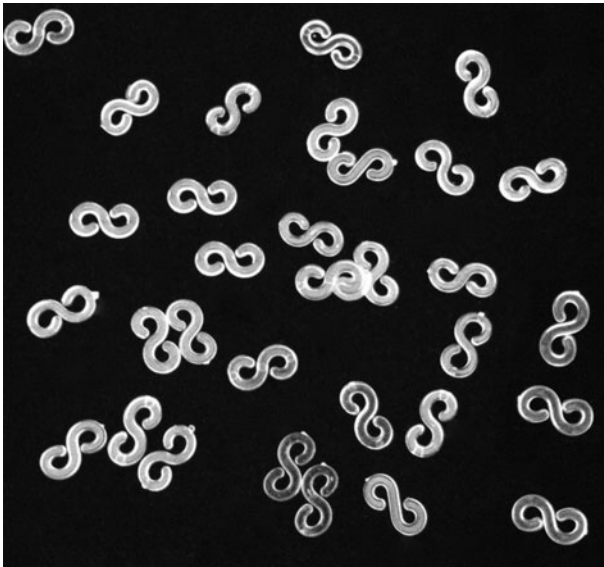


FIG. 3
S-shaped connectors.

reported by Passali *et al.* as being up to 12 per cent.⁶ Failure to restore airway patency and adequate ventilation results in cardiopulmonary arrest and death; however, this is uncommon. Of the 2000 cases studied by Passali *et al.*, there was 1 death. A total of 71.7 per cent of patients underwent endoscopic removal, with 8.8 per cent requiring surgery.

- Loom bands have become the world's most popular toy; however, there have been several recent health incidents involving these bands
- This paper reports on four paediatric patients who presented with a loom band associated foreign body in the nose over a 7-day period
- There is a risk that such foreign bodies can be inhaled and cause foreign body airway obstruction
- Foreign body airway obstructions are avoidable; young children should not be left unsupervised with loom bands

Prevention is key to reducing morbidity and mortality associated with the condition, with prevention cited as more effective than cure. Preventative measures should include public awareness through mass media exposure and public education programmes.^{7,8} Specifically in the case of loom band related foreign body presentations and potential foreign body airway obstruction, we believe that there is an urgent and imperative need for greater public awareness.

Witnessed inhalation or insertion of foreign bodies remains the primary source of referral for parents of paediatric patients. The possibility of foreign body inhalation must be considered in children who experience choking events; urgent medical review should be sought if this is suspected.

Conclusion

Foreign body airway obstructions in children are potentially avoidable, life-threatening events. The case series presented reflects a poor public understanding of the complications of inhaled foreign bodies in children and limited hazard advertising by the manufacturers of loom bands. There is a great urgency to rectify this in light of the ever-increasing popularity and availability of loom bands. Education and awareness of such issues can aid the prevention of inhaled loom band associated morbidity and mortality. The case series should also stand as a general reminder of the hazards associated with small items used by or in the vicinity of small children.

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