LETTERS

Liquid detergent capsule ingestion in children: an increasing trend

We wish to highlight a cluster of cases we have experienced over the past 18 months of laryngopharyngeal injury following the accidental ingestion of liquid detergent capsules (commonly known as liquitabs). Five children, all under the age of 2, were admitted as emergencies with stridor and drooling after biting into a liquid detergent capsule. All were taken immediately to theatre for panendoscopy assessment. Table 1 illustrates the endoscopic findings and management for each child.

Dishwasher and washing machine liquitabs are now a common finding in most homes but unfortunately seem very attractive to young children due to their bright colouring and soft 'sweetie-like' texture. There are numerous brands on the market, and all contain irritant cleansing ingredients. Some brands can also contain alkali. Whilst acidic substances denature superficial proteins and form an eschar that limits their penetration, alkaline substances exert a potent solvent action on tissue lipoproteins, producing liquefaction necrosis with intense inflammation and saponification.[1]

The arytenoids, epiglottis and oesophagus are particularly vulnerable to exposure after ingestion. Rapid onset of mucosal oedema can rapidly progress to airway compromise that can require a period of endotracheal intubation or tracheostomy, or like case 3, further airway surgery. Ingestion also has potential to result in oesophageal perforation with necrotic extension to the tracheobronchial tree, with potential mediastinitis and death.[2]

In 2009/10 the National Poisoning Information Service received 647 telephone enquires regarding exposure to liquid detergent capsule contents and over 3979 TOXBASE accesses were made,[3] making it the most common household product to be accidentally ingested. This is an increase over the previous year's total and more than double the number of enquiries made for these types of products 5 years ago. Scottish healthcare coding data suggests 82 cases of similar accidental ingestion over the past 10 years (personal email communication from Information Services Division Scotland received 17 January 2012).

We feel that the increasing trend in liquid detergent capsule ingestion poses a significant public health issue. Previous literature has already highlighted the risk of severe eye injuries in young children from these products.[4] In addition to the catastrophic impact on the child and family, these wholly preventable injuries also lead to a significant drain on paediatric intensive care resources. To help prevent future potentially life-threatening injuries, improved safety warnings and childproof packaging are urgently required. Most liquid detergent capsules do not come packaged in a childproof container and manufacturer compliance with packaging safety standards is currently voluntary. We have written to the manufacturers to inform them of these cases and for prompt intervention. Parents also have a vital role to play in ensuring these products are stored safely at all times and public education is required to highlight the danger of accidental ingestion.

Correction notice This paper has been amended since it was published Online First. In the second paragraph, second sentence the wording has been changed to the following: "There are numerous brands on the market and all contain irritant cleansing ingredients. Some brands can also contain alkali." Also, in the third paragraph, third sentence, "Alkali ingestion..." has been changed to "Ingestion".

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Table 1 Endoscopic findings and management of children admitted

	Age (months)	Findings at endoscopy	Outcome
1	22	Mild oedema of arytenoids	Managed conservatively with steroids and antibiotics
2	10	Ulceration of supraglottis, proximal oesophagus and gastro-oesophageal junction	Intubated and given steroids and antibiotics. Extubated day 2
3	18	Oedema and ulceration of the glottis and supraglottis Repeat endoscopy day 7 showed webbing of the anterior commissure, reducing the laryngeal inlet by 50% and soft subglottic stenosis narrowing to pinhole	Attempted balloon dilatation of subglottic stenosis day 7—unsuccessful. Cricotracheal split then performed. Extubated 7 days later with no residual stenosis on endoscopy at 2 months
4	17	Mild oedema of supraglottis	Intubated and given steroids and antibiotics. Extubated day 5
5	16	Subglottic oedema	Intubated and given steroids and antibiotics. Extubated day 7

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