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EDITORIAL

Foreign Body Ingestion and Aspiration in Children: Right Patient, Right Place, Right Time

Nils Kaufmann[1] | Jost Kaufmann[2,3] | Thomas Engelhardt[4]

[1]Department of Emergency Medicine, Ipswich Hospital NHS Foundation Trust, Ipswich, UK | [2]Department for Paediatric Anaesthesia, Children's Hospital Cologne, Cologne, Germany | [3]Faculty for Health, University Witten/Herdecke, Witten, Germany | [4]Department of Anesthesia, McGill University, Montreal, Canada

Correspondence: Thomas Engelhardt (thomas.engelhardt@mcgill.ca)

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Young children explore their environment with their hands and their mouths. All objects are fascinating at first, and some will inevitably end up in the wrong place, leading to hospital admission and further investigation. Consequently, emergency departments are inundated with anxious parents and some acutely ill children.

Several predictive tools have been proposed to discriminate between the needs to intervene urgently and a *watch and wait* approach [1, 2]. While the combination of big data and artificial intelligence may potentially assist in the decision-making process, a large proportion of children presenting to the emergency departments remain a diagnostic challenge. Clearly, an ingested and stuck button battery or a witnessed aspiration in a child with acute respiratory distress will trigger an immediate or urgent access to emergency intervention to avoid morbidity or mortality. Less clear-cut clinical scenarios, however, need a different clinical approach and a high index of suspicion in the primary reviewer. Negative endoscopies and bronchoscopies for a suspected foreign body are reassuring for the parents, patient and physician alike, however, they do carry a distinct perioperative risk, especially if performed out of hours or by teams with insufficient expertise. Regular reviews of established local practices and related outcomes are required to maintain and improve clinical outcomes.

Bjerregaard and colleagues from Odense University Hospital in Denmark report such an analysis and present their recent 5-year experience of 82 children with suspected foreign body aspirations in relation to the expected standard of treatment within 24 h [3]. The median time from aspiration to bronchoscopy was 19 h, and over one-third of cases experienced delays beyond 24 h. Delays occurred both before hospital admission (20 children) and after admission (10 children). A foreign body aspiration was confirmed in less than 30%, underscoring the persistent diagnostic challenge, despite several efforts, to establish a reliable predictive tool. Complications such as delayed extubation, pneumonia and admission to the paediatric intensive care unit occurred in 22 of all 82 cases, with a higher frequency in the delayed than the non-delayed group (37% vs. 22%). Importantly, all patients with a confirmed foreign body aspiration and treatment beyond 24 h suffered complications. This, at a first glance, suggests that delayed intervention was the primary cause of subsequent complications. However, the authors also report a very high 87.5% rate of complications in confirmed foreign body aspiration that was treated within 24 h. Other factors, than only time, also need to be considered.

The rate of complications in foreign body ingestion and aspiration in children is largely attributable to the expertise of the entire team from the identification and referral in the emergency department or primary care to the endoscopist and anaesthetist, including postoperative care. This institutional competence will ultimately determine the optimal outcome from a confirmed or suspected ingestion or aspiration. It may be better for the patient to wait for a more experienced team or arrange transfer if appropriate for the child not in immediate danger, especially if postoperative intensive care treatment is anticipated and not locally available.

Such an approach is supported by UK data of 165 children presenting for possible foreign body aspiration [4]. Only seven

children were taken to the operating room within 4 h of arrival outside normal operating hours due to signs of severe respiratory distress. The remaining children underwent their procedures the following day or two during daytime hours with the best possible setups. All children had their vital signs monitored until their procedures. There were no adverse events reported attributed to a delayed intervention. This approach is consistent in mitigating the higher morbidity and mortality risk of emergency surgery, especially if performed outside daytime hours. The German Association of the Scientific Medical Societies published updated guidelines for the perioperative care of foreign body aspiration and ingestion in 2024 [5]. It reviewed case files of near-misses or actual mortality in the process of this update and made similar recommendations: Treat the right patient at the right place at the right time.

In the meantime, improving education of parents, caregivers, and health professionals may reduce the occurrence and delays in care of children with foreign body ingestion and aspiration. Repeating the same message through information campaigns for both the public and medical professionals will go a long way. Analysis of one's own practices and protocols, however, is critical and well-known:

> Knowledge is won by the repetition of the same thing.
> –Aristotle.

Author Contributions

All authors have contributed equally to this editorial.

Conflicts of Interest

T.E. is editor of Acta Anesthesiologica Scandinavica. The other authors declare no conflicts of interest.

Data Availability Statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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