

Comparisons between Pediatric Aspirated/Ingested Foreign Bodies in Emergency Departments

Introduction: This study's primary objective was to compare demographics variables to mechanism of injury and disposition in pediatric aspirated/ingested foreign bodies (FB).

Methods: A cross-sectional study from 2010-2020 was conducted using the National Electronic Injury Surveillance System (NEISS) database. Pediatric patients (<18 years old) with a diagnosis of aspirated or ingested FB (n=37,451) presenting to emergency departments nationwide were identified. Age groups were defined as: G1 (<5 years old), G2 (5-13 years old), G3 (14-17 years old). **Results:** A national estimate of 109,847 aspirated FB and 810,311 ingested FB were isolated. Aspirated FB patients were more likely to be female, G1, African American (AA) or Hispanic, while ingested FB patients who were more likely to be male, G2, White, Asian, or Other.

Aspirated FB patients were more likely to have the same or transfer hospital admission compared to ingested FB. Pediatric AA aspirated FB patients compared to other race/ethnicity groups had the highest rates of transfer hospital admission (6.5% vs ≤5.8%; all, p<0.05) and mortality (0.6% vs ≤0.2%; all, p<0.05) and lowest rates of same hospital admission (5.7% vs ≥6.7%; all, p<0.05). Jewelry (33.0% vs ≥30.5%; all, p<0.05). Magnets (1.7% vs ≥1.2%; all, p<0.05) were most likely to be aspirated by AA.

Compared to age groups, G1 patients were most likely to aspirate on baby bottle formula, jewelry, paper, and toys, and more likely to ingest baby bottle formula and batteries. G2 patients were most likely to aspirate on coins, and ingest coins, magnets, and toys. G3 patients were more likely to aspirate on magnets, miscellaneous items, hardware, and jewelry.

Conclusion: Notable differences in type of aspirated/ingested FB are noted between race/ethnicity and age groups. Pediatric AA aspirated FB patients had the lowest rate of same hospital admission, and highest rate of transfer admission and mortality compared to other race/ethnicity groups.