

Intentional swallowing of foreign bodies and its impact on the cost of health care

November 1 2010

A new study from Rhode Island Hospital found that 33 individuals were responsible for 305 cases of medical intervention to remove foreign bodies that were intentionally swallowed, resulting in more than \$2 million in estimated hospital costs. The findings appear in the November issue of *Clinical Gastroenterology and Hepatology*.

Through a retrospective case study over an 8-year period, the researchers identified 305 cases of the intentional ingestion of foreign bodies at Rhode Island Hospital, a Level I trauma center in Providence, RI. The most common items were pens (24 percent), batteries (9 percent), knives (7 percent) and razor blades (7 percent). For the most part, extraction of the foreign bodies was successful during the initial endoscopic extraction except for 20 cases, and only two cases eventually required a surgical extraction. The 305 cases were associated with 33 patients, of which 79 percent were previously diagnosed with a psychiatric disorder.

Steven Moss, MD, is a gastroenterologist at Rhode Island Hospital and lead author of the paper. Moss says, "Intentional foreign body ingestion occurs among a relatively small number of patients with [psychiatric disorders](#) and is costly. While endoscopic retrieval is relatively safe and effective, it often requires [general anesthesia](#) and utilizes significant hospitals resources."

In 237 of the cases, the foreign bodies were successfully retrieved, most commonly from the stomach or esophagus. Attempts at removal were not successful in only 10 cases and surgical consults were required for

these patients. There were no cases of perforations or patient deaths. Hospital costs incurred in the patients' care from these 305 cases totaled \$2,018,073, borne primarily by government payers (Medicare and [Medicaid](#)). The greatest contributors to the costs were nursing care (56 percent), followed by endoscopy, [emergency department](#) and surgical services.

Moss states, "Our study shows that intentional ingestion of foreign bodies is a relatively common event at our hospital. Intentional, rather than accidental, swallowing is a poorly recognized and underappreciated problem which is potentially avoidable. A small number of patients, many of whom suffer from co-morbid psychiatric diagnoses, were responsible for over 300 foreign body swallowing cases, and more than two million dollars in hospital and physician costs." He adds, "Endoscopy was very safe and highly successful in retrieving the swallowed objects, and minor complications occurred in only 11 cases."

Moss reports that 58 percent of the patients were male while 42 percent were female and the mean age for the patients at the time of ingestion was 35. One patient was solely responsible for 67 of the 305 cases, while four patients accounted for 179 cases. More than half of the patients (53 percent) were admitted from residential institutions, mostly from a state-run chronic psychiatric inpatient facility. Thirty-eight percent of the patients were from private homes in the community, while nine percent were from prison. More than half of the patients were diagnosed with a mood disorder, while others suffered from anxiety, substance abuse, psychotic or impulse control disorders.

Co-author Colin Harrington, MD, a psychiatrist in the department of psychiatry at Rhode Island Hospital, explains, "The reasons for foreign body ingestion vary and it is one of many forms of self-injurious behavior. Foreign body ingestion can be a behavioral element of cognitive disorders, mental retardation syndromes, psychotic disorders,

and mood disorders. Various personality disorder diagnoses are also associated with foreign body ingestion where motivations are thought to include communication of internal distress, acting out due to anger, or even manipulation of the environment with a related secondary gain, such as transfer out of chronic institutional settings like prison or long-term treatment facilities." He adds, "In most cases foreign body ingestion does not represent a frank suicide attempt. Repetitive foreign body ingestion occurs in a very small group of patients and is typically difficult to treat and prevent."

Moss and the researchers conclude, "Foreign body ingestion is poorly understood, difficult to treat, and consumes considerable physician time and hospital resources. Attention should be focused on investigating how to avoid these preventable and costly episodes."

Provided by Lifespan

Citation: Intentional swallowing of foreign bodies and its impact on the cost of health care (2010, November 1) retrieved 25 April 2024 from <https://medicalxpress.com/news/2010-11-intentional-swallowing-foreign-bodies-impact.html>

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