Recurrent Intentional Foreign Body Ingestion and Its Impact on a Tertiary Healthcare System: An Algorithm for Clinical Management

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INTRODUCTION

- Managing intentional foreign body ingestion (IFBI) is uniquely challenging for health care systems. The burden of recurrent intentional foreign body ingestion (RIFBI) is large and difficult to mitigate, impacting hospital resources and staff morale.
- The incidence of foreign body ingestion is increasing, having nearly doubled between 2000 and 2017 from 3/100,000 to 5.3/100,000[1]. IFBI accounts for up to 92% of all adult foreign body ingestions, and is very common in individuals with psychiatric illness, substance abuse disorder, and in incarcerated persons.[2]
- We present our single center experience and highlight an exemplary case that illustrates the far-reaching impact of RIFBI on the health care system.
- We outline the implementation of a management protocol for RIFB which was created to address the challenges presented by caring for this patient and hope that it serves other practitioners faced with similar challenges.

METHODOLOGY

- The RIFBI systems-based management algorithm was developed by our facility in collaboration with medical and surgical subspecialties, as well as hospital administration and community psychiatric facilities.
- A single case of RIFBI well known at our tertiary care center was selected for this study to review and have the algorithm applied to.
- Study period: June 1, 2018 to December 31, 2021

RESULTS

- Our patient was a 32-year-old female with a history of schizoaffective disorder, PTSD, and BPD with multiple involuntary psychiatric hospitalizations in the past for self-destructive and suicidal behavior.

- **Total Admissions:** 51
- **Cumulative Length of Stay:** 124 days (2.43 days per admission)
- **Total Imaging:** 135 X-Rays, 8 CT scans
- **Total Procedures:** 50
  - 92% esophagogastroduodenoscopies
  - 4% exams under anesthesia (1 including exploratory laparotomy, colotomy, and descending loop colostomy creation)
  - 4% sigmoidoscopies

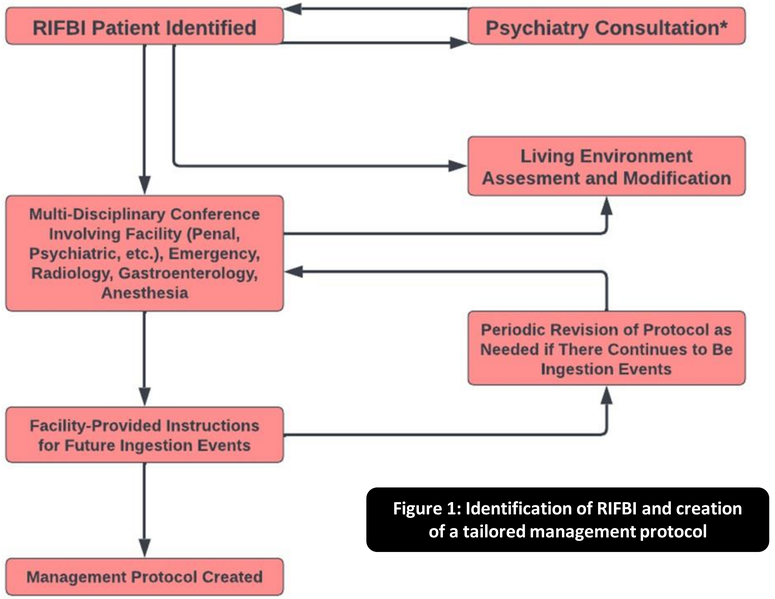


Figure 1: Identification of RIFBI and creation of a tailored management protocol

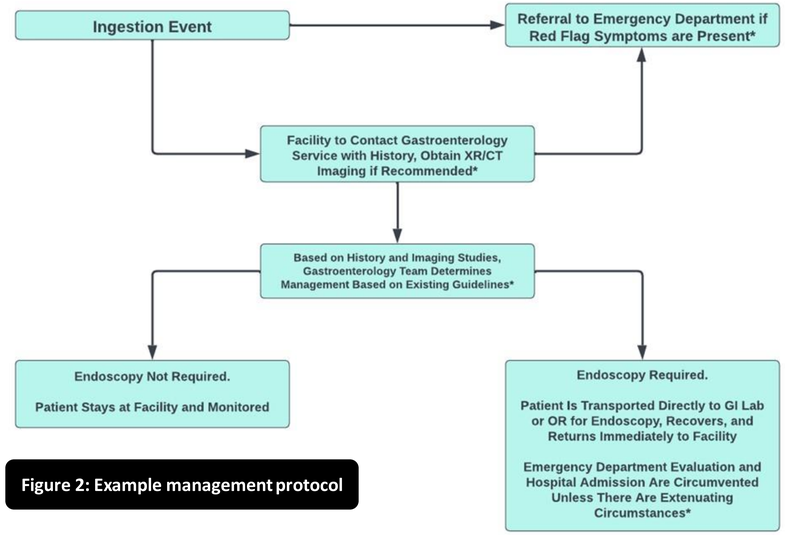


Figure 2: Example management protocol

RESULTS CONT. AND DISCUSSION

- **Gross Charges:** $469,780
- **Hospital Revenue:** $70,550
- **Total Cost to Hospital:** $328,193 [Figure 3]
- **Hospital Net Income:** (- $257,644) NET NEGATIVE!!

- **With the implementation of our RIFBI protocol** [Figures 1 and 2]**:**
  - **27 admissions were avoided entirely**
  - **10 admissions to the floor lasted <24 hours**
  - **7 admissions lasted ≤48 hours**
  - With a **safe** and **≤24-hour length of stay** as being the optimal primary endpoints of our protocol, **~$287,500 was saved in hospital costs**

- RIFBI by psychiatric patients is a serious concern at our institution with the phenomenon occurring multiple times per month. The problem similarly echoed by multiple institutions across the country. With the algorithm provided in this study, it is evidenced that a clear benefit can be achieved by managing such patients on an outpatient basis if possible.

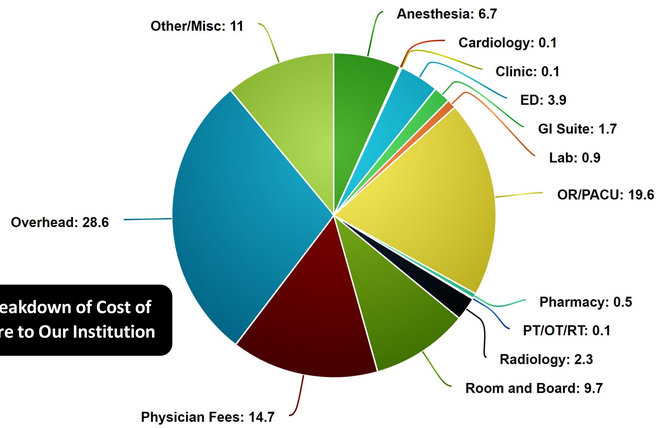


Figure 3: Breakdown of Cost of Patient's Care to Our Institution

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