



Multifaceted Assessment of a Prisoner Ingesting Nine Batteries for Suicidal Purposes

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Abstract:

Foreign body ingestion is a common event that mostly occurs accidentally in the pediatric population. In adults, unintentional swallowing of objects occurs primarily in the elderly population, alcohol abusers and persons with learning disabilities, whereas intentional episodes occur in individuals with mental disorders and prisoners. Foreign objects commonly ingested by children include coins, magnets, toy parts and button batteries while in adults swallowing of fish bones, chicken bones, needles and dentures are common. Ingestion of razor blades, other sharp metallic objects and batteries was reported among prisoners as a means of self-harm. Ingestion of multiple AA batteries by adults usually occurs as a result of personality disorder or psychiatric illness, whereas it may be used by inmates to draw attention or as means to get away from the prison environment. Repeated foreign body ingestion as mode of self-harm poses challenges for hospitals by creating increased workload, for prison staff due to extra working hours and liabilities and for countries as a result of additional costs incurred by treatment of such prisoners. In the present study, we aimed to draw attention to the need to take measures to prevent such cases and to offer well-designed psychological support programs to prisoners in the future by discussing a case of multiple foreign body ingestion in a 37-year-old incarcerated male charged with prison sentence of 22 years who swallowed an unprecedented high number of AA batteries (nine).

Key words: Endoscopy, Foreign Bodies, Homicide, Personality Disorders, Suicide.

Introduction

Foreign object ingestion is a common event that mostly occurs accidentally in the pediatric and elderly population while intentional ingestions are frequently seen in prisoners [1-5]. Patients present to the emergency room mostly with symptoms of epigastric pain, dysphagia and chest pain. One-third of patients are reported to be asymptomatic

[6]. If an ingested foreign object is radiopaque, it is often detected and readily diagnosed by plain radiography [2,7,8].

The clinical approach to a patient with a foreign body in the gastrointestinal tract is determined by the characteristics (type, number, shape and

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anatomical location) of the material ingested, the time of ingestion and patient's age, subjective symptoms and clinical findings [3,4]. Ingested foreign objects pass through the gastrointestinal tract spontaneously in 80-90% of the cases, with only 10 to 20% requiring endoscopic intervention and less than 1% requiring surgical intervention [5-7]. Ingestion of multiple AA batteries by adults is a highly unusual and rare mode of deliberate self-harm and it can also occur as a result of personality disorder or psychiatric illness or attention-seeking behavior as seen in prison inmates [9,10].

The aims of the present study were to draw attention to the significance of foreign body ingestion by reporting a case of multiple foreign body ingestion in an incarcerated male who admitted to the emergency room after swallowing nine AA batteries and to share our experience with this outstanding case, unprecedented in the medical literature due to the large number of batteries involved.

Case Report

A 37-year-old male inmate who was charged with prison sentence of 22 years for committing homicide and served 7 years of his sentence was reported to the prison management by his fellow inmates after attempting suicide by swallowing a large number of batteries during noon hours. Subsequently, he was admitted to the emergency room of a state hospital with abdominal pain and vomiting. According to the hospital records, an emergency endoscopy was performed upon detecting foreign bodies in several intestinal locations which were identified as batteries by radiographs [Fig.1]. Only one battery could be retrieved from the duodenum by endoscopic intervention [Fig.2] and consultation with general surgery department was suggested by the attending gastroenterologist for the remaining, more deeply located batteries. The patient was then hospitalized in the detention ward and assessed by the general surgery department. On



Fig.1: Abdominal X-ray showing foreign objects (AA batteries) in several locations of the intestinal system prior to endoscopy.



Fig.2: Endoscopic removal of the foreign object (AA battery).

physical examination, he was conscious, cooperative and fully oriented, did not show acute abdominal symptoms and his general condition was good with stable vital findings.

Systemic examination revealed scar tissues from old wounds in his upper extremities possibly inflicted by a sharp object (razor blade) and healed surgical wounds in the median line of the abdomen. He was kept under observation and after

about 20-24 hours of his admission, batteries were naturally excreted via feces without administration of any laxatives. No foreign object was seen in the intestinal system by follow-up radiographs [Fig.3] and the patient was discharged without any further pathological findings.

Discussion

Ingestion of foreign materials most commonly occurs in the pediatric population younger than 6 years of age or in adults 25 to 44 years of age, predominantly in males [6,7]. Malliwal *et al.* [10] reported a 54-year-old male with a history of personality disorder who swallowed five AA batteries. A case of multiple foreign body ingestion was reported by Dunphy *et al.* [11] in a 37-year-old incarcerated male who swallowed eight batteries. Our literature review did not identify any reports of ingestion of a higher number of batteries than in the case we present here. In this regard to best of our knowledge, our case is the first reported case in scientific literature globally with the highest number of batteries ingested.

Presenting symptoms following ingestion of a foreign object include epigastric pain in 55%, vomiting in 16%, dysphagia in 7%, pharyngeal discomfort in 4% and chest pain in 3% of the cases, whereas 30% do not experience any symptoms. Consistently, the patient reported by Dunphy *et al.* [11] did not experience symptoms of nausea/vomiting or clinical findings suggesting intestinal obstruction. Our patient had complaints of nausea, vomiting and abdominal pain. Since most foreign bodies are radiopaque substances, they can be detected by plain radiographs without any difficulty [2,12]. For our patient, diagnosis was made by direct radiography and further investigations were not needed.

While the motives behind foreign body ingestion may be varied (eg, in order to achieve



Fig.3: Follow-up X-ray view obtained prior to discharge.

hospitalization and as a result of attention seeking behavior among prisoners), it is rarely used for suicidal purposes. This is because most suicide attempts do not lead to death and ingested objects are eliminated through the gastrointestinal tract harmlessly if they have smooth edges, and complications including obstruction and perforation are amenable to treatment since they develop slowly [1]. During a discussion with our patient, he admitted that he swallowed the batteries deliberately for suicidal purposes and the outcome was not fatal.

Foreign objects detected early in the esophagus or stomach can be removed by endoscopy [4]. In our patient, an attempt was made to retrieve batteries by endoscopic intervention but only one could be removed. Follow-up with serial radiographs obtained every three days is recommended if the patient is stable and battery integrity is not impaired [10]. In our case, remaining batteries were naturally removed from the gastrointestinal system within 24 hours without any complications. In the case reported by Dunphy *et al.* [11], the batteries failed to progress through the gastrointestinal tract, requiring surgical intervention.

Foreign body ingestion is a problem frequently encountered by emergency room physicians and gastroenterologists. The medical and psychiatric literatures do not focus much attention on prevention of and psychotherapy for the self-harm behavior associated with repeat foreign body ingestion. Recurrent intentional foreign body ingestion requires a multidisciplinary approach for managing these challenging cases. It was reported that total healthcare costs associated with such cases amount to millions of dollars and average inpatient length of stay is 5-6 days [13].

Particularly, detainees and sentenced prisoners who deliberately choose non-fatal suicide methods do so to get sympathy and achieve better treatment from both prison officials and other inmates, to draw attention to their situation and to get away from the prison environment. This mode of behavior creates challenges for those employees who are responsible for the safety of prisoners. Such cases place a significant additional workload on prison staff (eg, transfer to and from hospital, guarding a hospitalized prisoner) and a huge burden on the national economy due to the requirement for allocation of healthcare resources. Additionally, these incidents create feelings of anxiety, fear, insecurity, lack of trust in the justice system and concerns over the prison conditions among the relatives of prisoners and detainees, giving rise to the thinking that institutional conditions are so poor that prisoners see suicide as the last resort. However, prisons are institutions where the safety of inmates who are under state protection is a top priority.

In conclusion, it is our belief that, procedures must be in place in prisons to implement suicide prevention measures, to improve conditions in the general prison environment, to develop a training programme for correctional staff and care givers to help them recognize suicidal inmates and identify prisoners with mental disorders in need of treatment

and to provide necessary treatment in order to reduce the frequency of such incidents. These measures would also help reduce rising financial costs associated with such cases and promote trust in government institutions among the citizens that the state fulfills its moral and public responsibility.

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