
Case Report

Repeated Ingestion of Sharp-Pointed Metallic Objects

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A 20-year-old woman was brought to the surgical outpatient department with the strange history of irresistible desire to ingest metallic substances, mainly nails and pins. Her problems were initiated after she was forced to marry against her wish. She had no abdominal complaints and on examination the abdomen appeared absolutely normal. Plain radiograph confirmed numerous nails and pins inside her GI tract. On detailed psychologic evaluation, she was found to be suffering from deviant sexual behavior and marriage against her wish acted as a stressor in the development of this habit.

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Introduction

Although foreign body ingestion is common and a benign event, serious complications occasionally require medical intervention. Irresistible and elective craving leading to repeated ingestion of such non-nutritive substances occurring over a period of at least one month in the absence of another major mental disorder is designated as “pica”.¹

This culturally and developmentally inappropriate condition is commonly associated with iron and zinc deficiency and is seen mostly in children with a strong family history. In adults it is commonly associated with pregnancy and may also occur in context to other illnesses such as autism, mental retardation, and schizophrenia.¹

Successful approaches to treatment are behavioral treatment and treatment of the underlying cause like psychosis.¹ Timely recognition of the condition and appropriate treatment can avoid the complications.

Case Report

A 20-year-old woman was brought to the surgical outpatient department (OPD) by her anxious relatives who were horrified by the sight of her ingesting a handful of metallic substances, mainly nails and pins of various sizes. Apparently she was doing so over the last month, but had no abdominal complaints. The ingested materials were regularly passed out with her stool without any problems.

According to her, she developed this habit, more than a month back, after she was forced to marry against her wish. Incidentally, she had returned to her parents within a few days of her marriage as she had aversion towards sexual relation with her husband. After being admonished by her parents for this, she suddenly developed the desire to ingest metallic objects, mainly nails obtained from a local hardware shop. She had lost her normal appetite, felt anxious and agitated in the absence of these metallic objects, and experienced a profound sense of satisfaction after consuming them. These sharp objects were surprisingly not causing any abdominal problems. On examination, the abdomen appeared absolutely normal except for palpable foreign bodies in the form of nails and pins on digital rectal examination. There was no past or family history of any psychiatric illnesses.

Her blood investigations were normal. The plain radiograph showed numerous nails and pins inside her abdomen (Figure 1).

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Figure 1. Multiple metallic foreign bodies in different parts of the gastrointestinal tract.

She was later referred to and evaluated at the psychiatry OPD where she was initially diagnosed to be suffering from “pica”. On subsequent interrogation, she gave the history of sexual abuse at the age of six years and found to have homosexual inclinations. These could explain her postmarital abnormal behavior.

On detailed psychologic evaluation in repeated sessions, clinically and with psychological tests (Rorschach test, Thematic Apperception Test, and International Personality Disorder Examination), she was found to be suffering from depressive disorder, impulse control disorder (not otherwise specified), and pica. No personality disorder was detected.

The patient’s relatives were advised to continue psychiatric counseling and regular follow-ups in surgery OPD, and to report immediately in case of any abdominal complaints. During the follow-up in psychiatry OPD, she was treated with 10 mg escitalopram along with interpersonal and supportive psychotherapy. After the treatment, her depression improved. Her fear regarding marital relation improved and she was finally able to live with her husband. Impulsive ingestion of sharp objects also improved gradually. The metallic objects were passed out per rectum over a period of time.

At the time of reporting, she was continuing her treatment in psychiatry OPD, and was also being followed up in surgical OPD.

Discussion

Most of the foreign body ingestions occur in pediatric population with peak incidence between six months to six years.² Both sexes are equally

affected. In adults, repeated ingestion of multiple foreign objects are seen mainly in alcoholics, in those with psychiatric illness or mental retardation, and also in those seeking secondary gain with access to medical facility.³ The latter is particularly applicable to prisoners with the motives to leave prison.³

Some stressful events may precipitate the development of pica. Multifactorial model of etiology have been proposed by which organic, familial, socioeconomic, and cultural factors interact with each other. In this case, the stressors were in the form of childhood sexual abuse, inability to disclose her deviant sexual inclinations due to fear of being ostracized, marriage against her wish, and to some extent boredom after marriage. The development of the illness and the subsequent attention she received from her parents enabled her to avoid returning to her husband.

Eighty percent of ingested foreign bodies that reach the stomach will pass uneventfully through the gastrointestinal tract. Ten percent to 20% will require nonoperative intervention and 1% or less (mainly long sharp metal objects) will require surgery because of obstruction, perforation, or hemorrhage.^{1,4,5} Pre-existing intestinal disease such as ileal stricture due to Crohn’s disease or tuberculosis increases the risks of such complications.⁴

Mortality following foreign body ingestion has been extremely low. Impaction, perforation, or obstruction occurs at areas of physiologic narrowing or acute angulations such as the cricopharyngeal sphincter or ileocecal valve.⁶ Once a foreign body, even sharp-pointed ones, has entered the stomach, it will most likely pass through the alimentary tract uneventfully.² For blunt objects, observations as outpatients may well be done if they have entered the stomach. Most objects are passed within four to six days though some may take even four weeks.² Blunt objects that fail to pass the stomach within three to four weeks or remain static beyond the stomach for more than one week, need to be removed.² Rarely foreign bodies such as birdshot, metal dental drill bit may present later as appendicitis.⁶

Because perforations are seen in around 35% of patients ingesting sharp-pointed metallic objects, animal or fish bones, toothpicks, needles etc., attempts to carefully retrieve them by endoscope should be made even if they have passed into the stomach.⁵ Otherwise they should be followed with daily radiographs or hand held metal detectors.

Surgical intervention should be done if they fail to progress for three consecutive days.² While the patients are under observations, they should report immediately in case of abdominal pain, vomiting, fever, hematemesis, or melena.

Nonpharmacological (supportive psychotherapy, cognitive behavioral therapy) and pharmacologic psychiatric management as indicated should be essential parts of treatment protocol.

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