

# THERAPEUTIC ENDOSCOPY: ENDOSCOPIC REMOVAL OF AN UNUSUAL INTRAGASTRIC FOREIGN BODY

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## SYNOPSIS

**This case report describes the removal of an intragastric thermometer via an endoscopic polypectomy snare. It is a safe and effective procedure and, as compared with surgical removal, it reduces the days and cost of hospitalization as well as operative morbidity.**

## INTRODUCTION

Fiberoptic Endoscopy is an established investigative tool in the diagnosis of gastrointestinal disorders. It is of particular value in localization of source of upper gastrointestinal bleeding (G. N. Chandler, 1976) and the suspected lesion can be biopsied under direct vision.

In recent years, there has been increasing therapeutic applications of endoscopic procedures. Gall stones in the common bile duct can be removed by endoscopic sphereterotomy of ampulla of Vater (Kawai, 1975) and gastrointestinal polyps removed by application of electrosurgical current through a polypectomy snare (Tsuneoka, 1969). Polypectomy snare has also been found to be particularly useful in removal of gastrointestinal foreign bodies (De Cerome, 1973). The following case report describes the removal of an intragastric thermometer using polypectomy snare through the Olympus GIFD<sub>3</sub> fiberoptic pan-endoscope.

## CASE REPORT

A 31 year old Indian labourer was admitted on 16.6.79 to Singapore General Hospital complaining of severe abdominal pain. Soon after admission, he became aggressive and angry because he was not attended to immediately by the admitting doctor. He then swallowed a bedside thermometer. He was observed for 3 days with serial abdominal Xray (Figure 1) which showed no progression of the intragastric thermometer through the gastrointestinal tract.

He is a known case of Munchausen Syndrome with psychopathic personality, and had numerous abdominal operations for abdominal pain since 1969. For the past 18 months, however he has developed a crave for swallowing thermometers and had at least 8 surgical operations for removal of intragastric thermometers in the four major hospitals in Singapore.

During the last two surgical operations the stomach was found to be scarred and adherent to the abdominal wall. As further surgery was deemed problematic he was then referred for possibility of endoscopic removal.

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Endoscopy was performed under general anaesthesia as patient was very uncooperative. An Olympus GIFD 3 fiberoptic pan-endoscope passed with ease into the stomach. The thermometer was found to be lying obliquely on the posterior wall of the body of stomach with the mercury end lying distally. A biopsy forcep was passed to move the thermometer to a more horizontal position. A polypectomy snare was then passed through the biopsy channel and manoeuvred under direct vision to snare around the "neck" of the thermometer. The snare was gradually tightened and withdrawn to 2-3 cm distal to the tip of endoscope. The endoscope together with the polypectomy snare were slowly and carefully withdrawn, as a unit, through the narrow cardioesophageal junction into the esophagus and was removed from the oral cavity by a small forcep.

The patient was discharged from the hospital next morning.

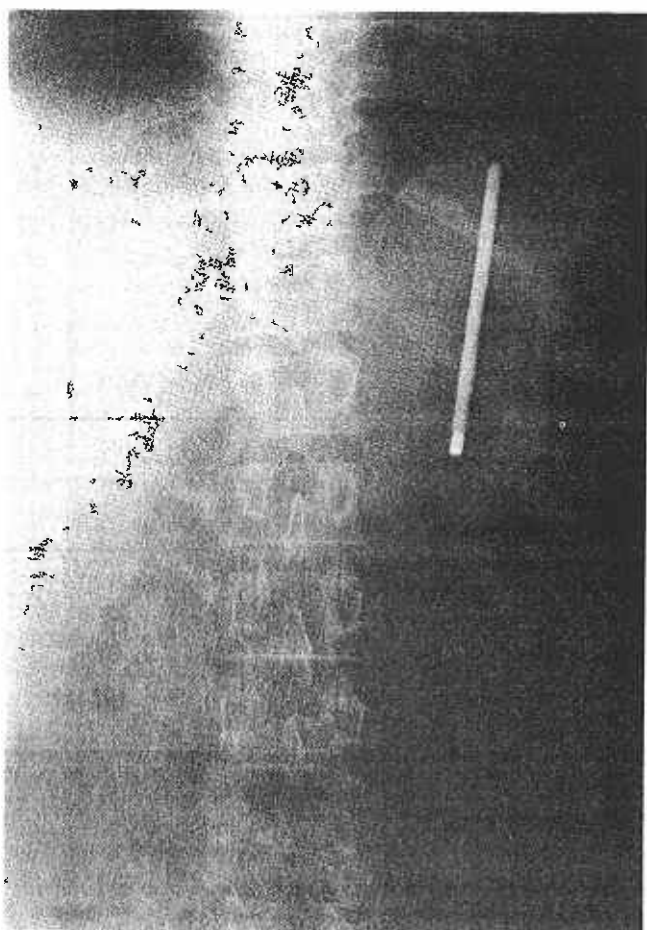


Figure 1 Abdominal Xray shows intragastric thermometer.

## DISCUSSION

Most foreign bodies in the upper gastrointestinal tract pass spontaneously and unless it is a sharp object with danger of perforation, watchful waiting should be the first approach to an ingested foreign body. If the ingested foreign body does not leave the stomach in 48-72 hours, attempts should be considered to remove the object endoscopically (Waye, 1976) as bowel obstruction ulceration and even perforation can occur.

Until recently removal of foreign bodies from esophagus was done by Otolaryngologist using rigid

esophagoscope with relative ease; and most foreign bodies in the stomach not passed spontaneously usually required surgical removal. With the advent of flexible fiberoptic endoscope and biopsy many foreign bodies had been removed from gastro-intestinal tract endoscopically. The small size of the "jaws" of biopsy forceps however makes removal of larger objects difficult or impossible. The application of a polypectomy snare (Dunkerley, 1975) had over-come this difficulty in most cases.

Endoscopic removal of oblong object using a snare however can be difficult because the axis of foreign body becomes perpendicular to the long axis of the endoscope as the snare is withdrawn. (Nacienceno, 1974). This problem was circumvented in our case by allowing the snare to hang out 2-3 cm from the distal tip of the endoscope while the snare is tightly looped onto the "neck" of the thermometer. (Figure 2). As the endoscope and snare were withdrawn to the cardio-esophageal junction and with air insufflation, the thermometer would be positioned with its long axis parallel to the long axis of the esophagus, thereby permitting easy passage through the cardio-esophageal junction.

In all his previous surgical operations for removal of intragastric thermometers the mean post operative hospitalization, stay was 5.5 days. Present endoscopic procedure therefore reduces the period and cost of hospitalization as well as operative morbidity. It is recommended that surgical intervention for ingested foreign bodies should be delayed until endoscopic technics have been attempted.

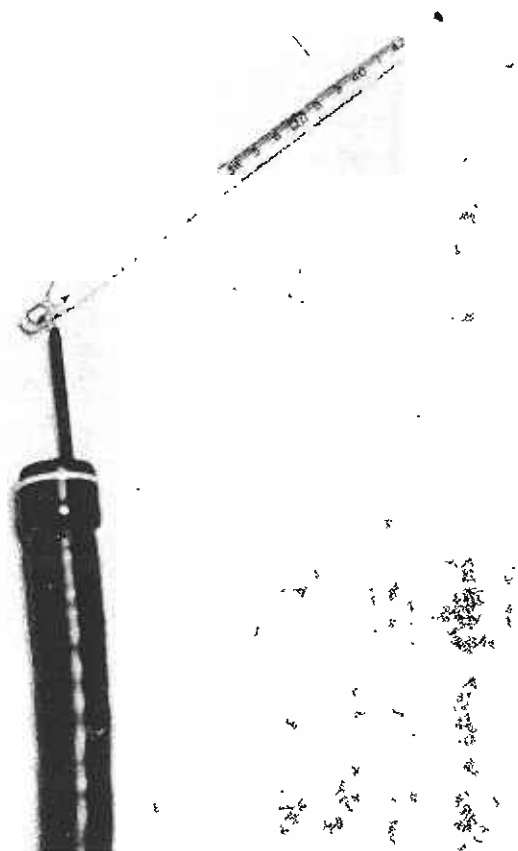


Figure 2 shows thermometer removed by polypectomy snare.

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