European Geriatric Medicine 7 (2016) 190–193

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EGM clinical case

Esophageal impaction caused by a blister-wrapped tablet: Case report and review of the literature

ARTICLE INFO

Keywords:
Elderly
Esophagus
Foreign body

1. Introduction

A myriad of foreign bodies could be ingested by elderly people and impacted the gastrointestinal tract. The most common location for foreign body obstructions is the esophagus. The esophageal foreign bodies include food bolus and various blunt or sharp objects [1,2]. Swallowing of dental prostheses also has been reported in elderly patients [3,4]. Dysphagia, odynophagia, chest discomfort and inability to handle secretions are the usual symptoms of foreign body impaction in the esophagus in adults [1,2]. The foreign bodies can cause abrasions, punctures and perforations, resulting with injuries or infections to surrounding structures [1,2].

Swallowing blister-wrapped tablets, also named press through package (PTP), is an unusual cause of esophageal impaction in elderly persons. The presented patient was a 85-year-old man with severe dementia who ingested a blister-wrapped tablet, fact that escaped the attention of his family members. He was brought to hospital suffering from dysphagia and refusal to eat. PTP impaction in the esophagus was diagnosed and finally retrieved, using "push into stomach" technique. We review the relevant literature and discuss the various aspects of this rare entity.

2. Case report

A 85-year-old man suffering from severe dementia and memory loss was admitted with 3-day-history of epigastric pain, nausea and difficulty of swallowing. The patient was not able to eat and drink. The last stool was passed one-day prior admission. He had ischemic heart disease, gastro-esophageal reflux disease, benign prostate hypertrophy, constipation, diverticulosis of colon and glaucoma. His regular medications included: omeprazole, dipyridamole, furosemide, alfuzosin and enalapril.

On admission, his blood pressure was 160/75 mm Hg, pulse 60/min and regular, and oxygen saturation was 96% in the room air. Physical examination of lungs and heart was unremarkable. On abdominal palpation, epigastric tenderness was noted. Rectal examination was normal. Laboratory findings included normocytic anemia with hemoglobin concentration of 100 g/L, serum creatinine 117 μmol/L and albumin 29 g/L. Potassium, sodium, calcium, amylase, bilirubin and liver enzymes were normal. Chest and abdominal radiography were unrevealing.

Intravenous treatment with ranitidine did not improve his condition. Barium-swallow examination of esophagus showed impaction of the distal esophagus by a foreign body. Esophagoscopy examination demonstrated foreign body in the distal esophagus, in the form of tablet incorporated in its plastic blister original pack (Fig. 1). An attempt to extract the foreign body using air insufflation and overtube was unsuccessful. Therefore, the PTP was gently pushed into the stomach, grasped by polypectomy

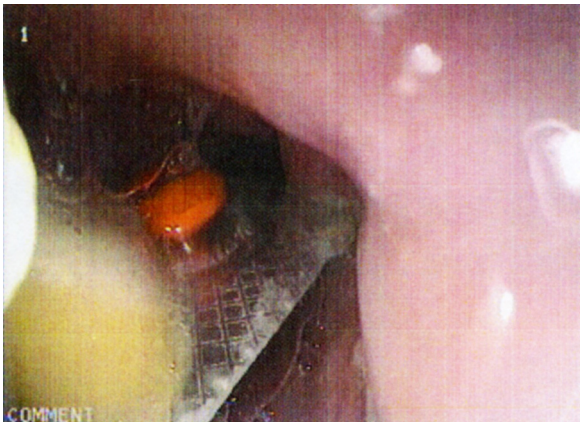

Fig. 1. Esophagoscopy showing a tablet incorporated in its original pack of plastic blister in the distal esophagus.

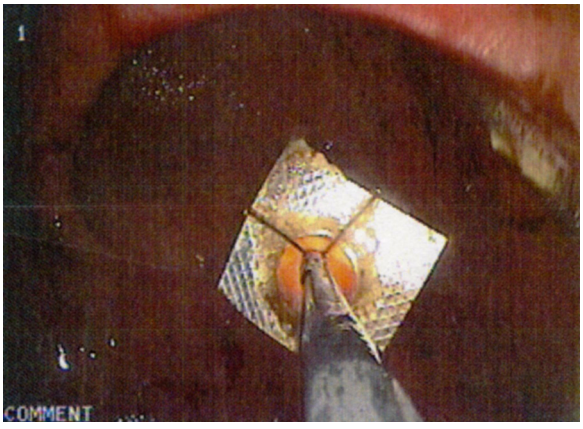

Fig. 2. Gastroscopy demonstrating blister-wrapped tablet in the stomach, which is grasped by polypectomy snare.

http://dx.doi.org/10.1016/j.eurger.2015.03.003

Table 1
Characteristics of the patients with blister pack ingestion in the esophagus.

Reference no./author/year	Age/sex	Symptoms	Mental status	Drug ingested name/size(mm)	Diagnostic images	Treatment	Complications	Outcome
[6] Gelfand and Durning 1978	85/F	Dysphagia, odynophagia	Normal	Aspirin/NR	BS, esophagoscopy	Removal with biopsy forceps	No	Recovery
[7] Yip et al. 1998	79/M	NR	Normal	NR/17x18	Esophagoscopy	Removal with forceps of 2 flexible endoscopes	No	Recovery
[7] Yip et al. 1998	85/F	Odynophagia	Normal	Cimetidine/NR	BS, esophagoscopy	Removal with grasping forceps	Esophageal perforation	Recovery
[5] Sakakura et al. 1997 - 60 cases	Range 40-99/NR	NR	NR	NR	BS, esophagoscopy	Removal with endoscope	No	Recovery
[7] Yip et al. 1998	72/F	Dysphagia, odynophagia	Normal	NR	X-ray, esophagoscopy	Removal with endoscope	No	Recovery
[8] Dutta et al. 2001	50/M	Dysphagia, odynophagia	Normal	NR/20 × 20	X-ray	Passed spontaneously	Esophago-pleural fistula	Recovery
[9] Gupta et al. 2002	84/M	Chest pain, fever, dyspnea	NR	Metformin/NR	X-ray, esophagoscopy	Removal with endoscope	Esophago-pleural fistula	Recovery
[10] Sudo et al. 2003	73/F	Hoarseness	Normal	NR/15 × 15	BS, CT, esophagoscopy	Removal with overtube and endoscope	Esophageal perforation	Recovery
[11] Hou et al. 2006	76/M	Odynophagia	NR	NR/12 × 09	X-ray, esophagoscopy	Removal with forceps and overtube	No	Recovery
[12] Seo et al. 2006 - 4 cases	Range 34-76/NR	Dysphagia	Normal	NR	Esophagoscopy	Removal with overtube and endoscope	No	Recovery
[13] Khan et al. 2007	70/F	Chest pain, dysphagia	NR	NR	BS, esophagoscopy	Removal with grasping forceps	No	Recovery
[14] Lee and Wang 2008	85/F	Odynophagia	Impaired	NR/18 × 15	X-ray, esophagoscopy	Removal with endoscope	No	Recovery
[15] Sarwar and Khan 2012	40/M	Dysphagia, odynophagia	NR	NR	BS, esophagoscopy	Removal with retrieval forceps	No	Recovery
[16] Hovde et al. 2013	75/M	Dysphagia, chest pain	Normal	NR/20 × 20	CT, esophagoscopy	Removal with endoscope	Esophago-tracheal fistula	Recovery
[17] Coulier et al. 2014	85/M	Chest pain	NR	Acetaminophen/30 × 35	CT, esophagoscopy	Unsuccessful removal with endoscope, supportive care	Esophageal perforation, pneumo-mediastinum	Dead
Present case	85/M	Dysphagia, epigastric pain	Impaired	Dipyridamole/18 × 20	BS, esophagoscopy	Removal with "push into stomach" technique using snare and overtube	No	Recovery

F: female; M: male; NR: non-reported; BS: barium-swallow; CT: computerized tomography.