



ORAL NITROGLYCERIN SOLUTION TO TREAT ESOPHAGEAL FOOD IMPACTION (NEFI) A MULTICENTER RETROSPECTIVE STUDY

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Introduction

- Esophageal food impaction (EFI) is a relatively common occurrence, with an estimated rate of 13 episodes per 100,000 people/year.
- Food impaction is initially treated by medications such as glucagon and benzodiazepines but with limited efficacy.
- Usually require urgent endoscopy if drugs fail.
- Anecdotal reports of successful use of oral nitroglycerin (NTG) in EFI.
- Possible mechanism: NTG-induced smooth muscle relaxation by cGMP generation
- This multicenter retrospective study aims to identify the effectiveness of oral nitroglycerin solution in esophageal food impaction (NEFI).

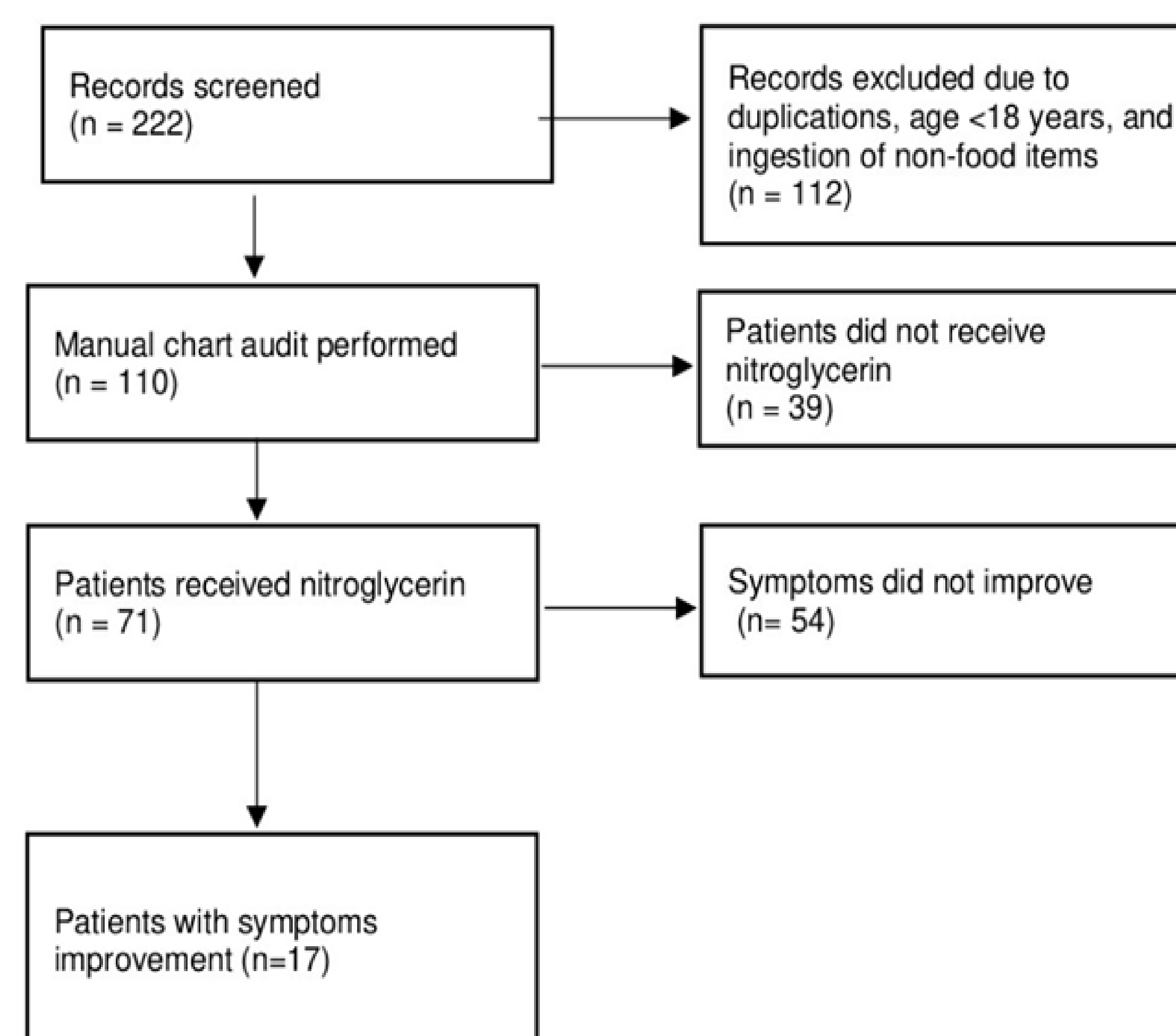
Methods

- Retrospective electronic chart audit of patients who visited the ER of RHS, MTH, and WBGH.
- Study period 01 Jan 2020 to 01 Nov 2021
- Patients identified by discharge ICD-10 codes T18.128A and T18.2XXA.
- Solution prepared by dissolving 0.4 mg of nitroglycerin in 5-10cc of water.
- All adult patients with symptoms of EFI
- Exclusion criteria: minor patients, pregnant or had swallowed non-food items such as metallic objects or batteries.
- The study was approved by institutional IRB (IRB-1690712-1)

Take-home points

- Oral nitroglycerin solutions worked in about 24% of patients with esophageal food impaction.
- The efficacy is similar to other currently used medications such as glucagon.
- Could be used as an adjunct therapy when other conservative managements fail.
- Purpose of using NTG is not to avoid EGD but to avoid emergent EGD.
- These patients should get EGD on the follow-up to determine the cause of food impaction.

Identification of included patients with esophageal food impaction



Results

- A total of 71 patients received a maximum of 2 doses of oral nitroglycerin solution (Figure 1)
- Seventeen patients (24%) had improvement in their symptoms.
- The oldest patient was 102 years old and had improved symptoms and did not need urgent EGD.
- Twelve patients did not undergo EGD and were discharged from ER with instructions to get elective EGD in 4-6 weeks as outpatients.
- Five patients who underwent EGD even after improvement in their symptoms showed absence of esophageal food bolus in 3 patients, and the other two patients had esophagitis
- A total of 13 patients (13/54 patients) who did not improve with nitroglycerin showed features of eosinophilic esophagitis (EoE)
- Predictors of non-response appeared to be EoE and proximal impaction.
- None of these patients had malignant appearing stricture on EGD.

