MEAT BOLUS IMPACTIONS IN THE OESOPHAGUS AMONG ELDERLY NIGERIANS IN NORTHWESTERN NIGERIA

BY

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SUMMARY

Background: *Impacted pharyngo-esophageal foreign bodies are more common in children than adults with various types of foreign bodies reported. The elderly may also be affected with foreign body impaction.*

Materials and methods: *This was a prospective study of elderly Nigerians who were admitted with symptoms of total dysphagia and odynophagia following ingestion of meat bolus over a 3½ year period (Jan.2002 to June 2005) from ear, nose and throat (ENT) department of usman danfodiyo university teaching hospital (uduth) sokoto, nigeiria.. They were managed 'conservatively '*

Results: *A total number of 10 elderly patients [7 males (70%), 3 females (30%), 3 females (30%)] were seen whose ages ranged between 70 and 90 years. The duration of symptoms was between 1 and 2 days. All had spontaneous disimpaaction between 24-48 hours while on conservative management. One patient came back 3 months after with confirmed features of hypoharyngeal and oesophageal tumour.*

Conclusion: *while conservative approach is advocated in all cases of meat bolus impaction for 24-48 hours to avoid possible attendant anaesthetic and surgical complications during rigid oesophagoscopy, it is imperative that contrast studies must be carried out on all patients with serial follow up to exclude any underlying malignancy after spontaneous disimpaction.*

Keywords: oesophagus , meaat bolus, foreign body elderly Nigerian

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INTRODUCTION

Foreign body impaction in the pharynx and oesophagus is common in children with coins leading the list as the commonest foreign body swallowed [1-6]. Adults usually present with impacted fish or meat bone or dislodged dentures amongst others [4,5,7]. Most of these foreign body impactions occur accidentally. When deliberate ingestion of foreign objects occur in an adult, an underlying psychiatric disorder should be excluded.

Dysphagia and odynophagia of sudden onset usually occur in impacted pharyngo-esophageal foreign bodies. Dysphagia, however, is a common problem in the geriatric or elderly patients [8-10] . The many causes of dysphagia in the elderly included stroke, neuromuscular disease, medications, cricopharyngeus dysfunction, Zenker's diverticulum, neoplasms etc [8-9]. Sudden and total dysphagia in the elderly is most likely to be due to accidental ingestion of foreign objects such as displaced dental prosthesis they are wearing or incompletely masticated food items in the edentulous or partially edentulous.

In the northern region of Nigeria, the number of elderly patients are on the increase just as the elderly population in Nigeria is increasing from recent population estimates of Nigeria[11].This means also that deglutination problems from impacted foreign body may be on the increase. This series of meat bolus impaction was found in elderly population from northwestern Nigeria.

This was a prospective study of all elderly patients presenting with history of odynophagia and dysphagia of sudden onset following a meal of meat bolus to the Ear, Nose and Throat Department of Usman Danfodioyo University Teaching Hospital (UDUTH) Sokoto between Jan. 2002 and June 2005 (3½ year).

On presenting to the Otolaryngology Service, they were admitted and placed on *nil by mouth,* intravenous fluid (5% Dextrose Saline), parenteral analgesies and broad spectrum antibiotics. They were screened for diabetes: (using urinalysis, random blood sugar and fasting blood sugar), and hypertension. Electrocardiography (ECG), chest X ray, serum electrolytes, urea and creatinine) and packed cell volume (PCV) were also done. Radiological investigation of soft tissue of the neck-anteroposoterior and lateral views were carried out. These investigations did not show features that were suspicious of meat bone or any other foreign body. All were partially edentulous and had no history of mental derangement.

At variable periods within the second 24 hours of observation, all patients had spontaneous dislodgement and swallowing of the impacted meat bolus. Thereafter, they were able to swallow saliva normally. They were then given sips of water and fluids on the third day before commencement of semisolids and solids. They were then discharged after 2 days of being symptom free and feeding normally.

They were requested to do barium swallow and return on follow-up two weeks later with the films for review.

RESULTS

There were a total of 14 patients who had meat bolus impaction in the oesophagus during the study period and 10 of them were elderly. Seven were males (70%) and 3 females (30%) whose ages ranged were between 70 and 90 years. The duration of symptoms was between 1 and 2 days. All had spontaneous disimpaction between 24-48 hrs of conservative treatment. Four patients (40%) were incidentally discovered to be hypertensive among which one was diabetic, requiring consultation with the physicians for control.

However, one patient was diagnosed hypopharyngeal and oesophageal tumour three months after initial presentation and was treated as such accordingly. All others have remained asysmptomatic. All the

elderly patients were partially edentulous and had no dental prosthesis fitted on them.

DISCUSSION

The elderly and edentulous individuals were unable to masticate properly and were therefore more likely to, present with impaction of FB of food origin. Dental prosthesis were fitted to assist them in mastication which may also serve the purpose of cosmesis[4,7]. Improperly masticated meat bolus was likely to be swallowed prematurely leading to impaction in the oesophagus. The 10 patients seen in this series were partially edentulous with no dental prosthesis.

Although tertiary peristaltic waves were abnormal waves that are stationary and non-propulsive and are usually seen in elderly subjects without oesohageal disease[12], the possibility of underlying malignancy as a cause of dysphagia should be excluded. Unfortunately one patient who despite spontaneous disimpaction of the impacted meat bolus recurrent episodes of dysphagia was found to have hypopharyngeal and esophageal tumour during follow up. This underscored the importance of Barium contrast studies. He was then subjected to rigid endoscopy and tissue biopsy for histological diagnosis which turned out to be malignant. Possible reasons for spontaneous disimpaction could be:

1. Secondary peristalsis originating locally at a point where the oesophagus is distended by the bolus of meat. This aids oesophageal emptying when the primary waves did not cleared the lumen of the oesophagus completely[12]

2. Increased lubrication and decomposition by saliva and upper gastrointestinal secretions following improved \hydration from intravenous fluids while on nil by mouth.

The elderly were high anaesthetic and surgical risk. Hence a rush for rigid oesophagoscopy may be delayed until conservative approach failed to expel the impacted meat bolus. Contrast studies should then be done before rigid oesophagoscopy if fiber optic endoscopic facilities are not available. One must be prepared to take biopsies of suspicious lesions to remove any other foreign bodies.

Our decision to adopt an initial conservative management protocol was informed from experience we had with two consecutive patients who we were waiting to complete all the pre-op investigations before taking them to the theatre for rigid pharyngo-esphagoscope. While waiting, there was spontaneous disimpaction in the two cases. (Both of them were hypertensive while one was also diabetic). We then decided to give a trial of conservative management on all patients with meat bolus impaction. This resulted in uneventful spontaneous expulsion in all 14 patients 10 of whom were over 65years old.

Attempts with agents to dissolve meat bolus using papain or aiding disimpaction with glucagons were reported in literature with various side effects and sometimes fatal results[1-3]. Our conservative approach was not associated with any side effects or complications.

The need for adequate investigation and preparation before an elderly patient is operated upon must be emphasized bearing in mind their perculiar physiological status of aging and increased tendency of having comorbidities[8,10]. We were able to discover 4 cases of uncontrolled hypertension and 2 of diabetes mellitus who needed to be stabilized accordingly by the physicians. However, where the symptoms of odynophagia and dysphagia persists and were unbearable, or there is a high risk of aspiration and patient has been adequately investigated and prepared for surgery, rigid oesophagoscopy may be carried out if in the opinion of the surgeon the procedure when carried out will confer more benefit to the patient than the conservative management every patient should be assessed based on the general anaesthetic or other inherent risk

factors perculiar to the patient. Serial follow up including contrast studies must be carried out later in all cases of spontaneous disimpaction to exclude any underlying pathology. Although this series is small, attention should be paid to well cooked soft meat, and adequate mastication of meat bolus. This is particularly so because multiple changes occur in each phase of swallowing mechanism with age [8,9]. In the oral phase, there is decreased masticatory strength, reduced tongue control, missing dentition or poor dental prosthesis. In the pharyngeal phase, there is delay in response and decreased pharyngolaryngeal sensory discrimination. In the esophageal phase, there is decreased or absent secondary peristalsis resulting in poor clearance of material from the esophagus[8,9].

Caution is needed to exclude meat bone as part of the foreign body ingested or any other foreign ingested or any other foreign body from history and radiological investigation which should be removed endoscopically. When the history is doubtful as to the nature of the foreign body and the mental status of the patient is uncertain, rigid oesophagoscopy should be carried out. It is far better to do an oesophagoscopy than to leave behind a potentially dangerous and harmful foreign body[13 – 15].

CONCLUSION

Conservative approach in the management of meat bolus impaction in the oesophagus for 24 – 48hrs is advocated in the elderly. Oesophagoscopy may, thereafter, be performed if conservative management failed. Convservatitive approach avoids unnecessary anaesthetic or surgical risk in carrying out rigid oesophagoscopy in the elderly. One should also bear in mind the possibility of an underlying pathology which should be sought for during follow up.

REFERENCES

1. Wilson J.A. The Oesophagus in Otolaryngology: In Kerr AG, Hibbert J (Eds) Scott-Brown's Otolaryngology Laryngology and Head and Neck Surgery. Butterworth – Heineman: Oxford, 1997:5/24/21 – 5/24/22

2.Stool S.E; Manning S.C: Foreign Bodies of the Pharynx and Oesophagus. In Bluestone C. D, Stool S.E. (Eds) Pediatric Otolaryngology: Philadelphia WBSaunders, 1990: p. 1009

3. Lewis S. Disease of Oesophagus. In Kerr AG, Adams D.A.Cinnamond M.J (Eds). Scott-Brown's Otolaryngology Pediatric Otolaryngology (6th Edition): Butterworth – Heinemen, Oxford; 1977 6/29/10 – 6/29/12

4. Okafor B.C.Foreign Bodies in the Pharynx and Oesphagus. Nig Med J. 1979; 9; 321 – 5

5. Okeowo PA. Foreign bodies in pharynx and oesophagus: a ten year review of patients in Lagos. Nigerian Quarterly Journal of Hospital Medical 1985; 3:46-50

6. Iseh K.R. Unusual Presentation of Oesphageal Foreign Body in aNigerian Child. Sahel Medical Journal 2003: 6(2): 63 – 65

7. Aghaji Mac, Nzewi O.C., Nwafo D. C. Obiako M.N. Egbue MO. Management of Impacted Upper Gastrointestinal Foreign Bodies of Dental Origin. J.R. Coll Edin, 1988; 33:328 – 329

8. Shields G. Bailey B. J. Geriatric Otolaryngology. In Quin F.B. RyanM.W. (Eds). Grand Rounds Presentation, University of Texas Medical Board, Dept of Otolaryngology. June 16th 2004

9. Schindler J.S; Kelly J. H: Swallowing Disorders and the Elderly Laryngoscope 2002: 112;589 – 602

10. Rosenthal R.A., Zenilman M.E: Surgery in the Elderly. In TownsendC.M., Beauchamp R.D., Evers B.M. Mattox K.L. (Eds).Sabiston's Textbook of Surgery Philadelphia WB Saunders,2001; pp 226 – 235

11. Nigeria Population: http://www.multied.com/nationbynation/nigeria/population.html

12. Adebonojo S.A: Oesophagus. In Badoe, E. A., Archampong, E.Q.,Rocha Afodu J.T. (Eds): Principles and Practice of Surgery including Pathology in the Tropics. Tema Ghana Publishing Corporation 2000: 349

13. Birchall M.A. Croft C. B: Examination and Endoscopy of the Upper Aerodigestive Tract. In Kerr A.G, Hibbert J. (Eds) Scott-Brown's Otolaryngology, Laryngology and Head and Neck Surgery (6th Edition) Butterworth – Heineman: Oxford, 1997:5/23/1 – 5/23/36

14. Bingham B.J.G. Hawthorne M.R: Synopsis of Operative ENT Surgery. Butterworth – Heineman: Oxford, 1992: 30: - 33, 249 – 251

15. Aytac A. Yurdakal Y, Ikizler C. etal: Inhalation of Foreign Bodies in Children. Report of 500 Cases J. Thorac Cardiovasc Surg 1977: 74:145 – 150.