

A THREE-YEAR AUDIT OF RIGID OESOPHAGOSCOPY AT LADY READING HOSPITAL PESHAWAR

Asif Nadeem, Amir Bilal, Kamal Afridi, Muqetullah

Department of Cardiothoracic Surgery, Lady Reading Hospital Peshawar

Background: The number of oesophagoscopies performed annually provides an indication of the extent of oesophageal disorders in any particular setting. The present study aimed to provide such data for rigid oesophagoscopy at the only referral centre for this procedure in Peshawar.

Methodology: An audit of all available records of patients undergoing rigid oesophagoscopies from January 2002 to December 2004, at the Lady Reading Hospital Peshawar was performed.

Results: A total of 200 cases of rigid oesophagoscopies were performed during this three-year period of study. The ages of patients ranged from 1 to 90 years, with a two fold male preponderance. The main indication was dysphagia, with major causes being oesophageal carcinoma (115, 57.5%), reflux oesophagitis (56, 28%), strictures of various aetiologies (19, 9.5%) and foreign bodies (10, 5%). Successful dilatation was possible in 70% of cases; the morbidity rate was 4.5% due to perforation observed in 9 cases. The mortality rate was 1.5% due to septicemia in 3 cases. **Conclusion:** A high rate of rigid oesophagoscopies was observed indicating an increased frequency of oesophageal disorders in this setting. The morbidity and mortality rates observed are within acceptable ranges for this procedure.

Key Words: Dysphagia, Oesophageal Carcinoma, Peptic Stricture, Oesophageal Perforation, Oesophagoscopy.

INTRODUCTION

Oesophagoscopy has been in vogue since the middle of the 19th century as a means of visualizing and treating certain oesophageal disorders.¹ A number of instruments were designed with this purpose in mind, the most successful of which was the rigid oesophagoscope, later followed by the flexible oesophagoscope.² Currently both instruments are in use, with their own indications and efficacies for similar or different oesophageal conditions. The major indication for oesophagoscopy is dysphagia,³ which can be due to a number of causes such as foreign bodies,⁴⁻⁶ tumors^{7,8} (benign and malignant) and strictures (reflux / peptic, corrosive, anastomotic, etc.).^{9,10}

The use of rigid or flexible oesophagoscopy may be determined by the suspected or actual anatomic lesion or condition in the oesophagus,¹¹ with various studies favouring the use of rigid or flexible oesophagoscopy for oesophageal foreign body extraction,¹² biopsies of tumors or suspected lesions,^{7,8,13} and strictural disorders requiring dilatation.⁹⁻¹¹

The present retrospective audit was undertaken to provide data regarding the use of rigid oesophagoscopy in our setting. The study will be of benefit in assessing the use of rigid oesophagoscope for the variety of clinical conditions for which it was indicated in our setting.

MATERIAL AND METHODS

The audit was undertaken at the Cardiothoracic Surgery unit of the Lady Reading Hospital Peshawar from January 2002 to December 2004. Hospital records of all

patients who had undergone rigid oesophagoscopy during the study period were obtained from a computerized database, reviewed and analyzed for the variables of study.

Data were analyzed for qualitative and quantitative variables and descriptive statistics were calculated.

RESULTS

A total of 200 cases of rigid oesophagoscopies were performed during the three-year period of study. One hundred and seventy seven patients (88.5%) were admitted through the Out Patients Department (OPD), 15 (7.5%) through Casualty Department and the rest (4%) from various medical units of the hospital.

The district wise distribution of patients showed 95 (47.5%) from Peshawar, 25 (12.5%) from Mardan, 35 (17.5%) from Dir and Swat and 15 (7.5%) from other areas of the North West Frontier Province (NWFP); there were 30 (15%) cases from the neighbouring country of Afghanistan. The regional distribution is shown in Table 1.

All patients presented with dysphagia and this was the indication for endoscopy as well. Endoscopy revealed oesophageal carcinoma in 115 (57.5%), reflux oesophagitis in 56 (28%), foreign bodies in 10 (5%) and strictures of various aetiologies in 19 (9.5%) patients (Table 3).

The yield of first successful diagnostic biopsy in oesophageal carcinomas was 75%; repeat

biopsies were required for the remaining 25% cases dubbed as doubtful malignancies on first biopsy. Successful dilatation was observed in 70% of the patients with benign oesophageal strictures on the first attempt at dilatation; the remaining 30% cases required two to four attempts for successful dilatation.

Table-1: Regional distribution of patients (n = 200)

Region	Number of patients	Percentage
NWFP Pakistan	170	85
Peshawar	95	55.9
Dir & Swat	35	20.6
Mardan	25	14.7
Others	15	8.8
Afghanistan	30	15

There were 135 males and 65 females (M:F ratio 2.07:1) in the study. The ages of patients ranged from 1 to 90 years. The age distribution is shown in Table 2.

Table 2: Age distribution of patients (n = 200)

Age groups (years)	Number of cases	Percentage
1 – 10	19	9.5
11 – 20	13	6.5
21 – 30	14	7.0
31 – 40	27	13.5
41 – 50	32	16.0
51 – 60	32	16.0
61 – 70	53	26.5
71 – 80	09	4.5
81 - 90	01	0.5

Table 3: Distribution of aetiologies of dysphagia in patients (n = 200)

Aetiologies	Number of Patients	Percentage
Carcinoma	115	57.5
Strictures	75	37.5
Peptic	(56)	(74.7)
Corrosive	(09)	(12.0)
Anastomotic	(08)	(10.6)
Others	(02)	(2.7)
Foreign Bodies	10	5.0

Foreign bodies were present in 10 (5%) cases, out of which 6 (60%) were children. Removal of foreign bodies was performed successfully in 7/10 (70%) cases. The 3 (30%) cases with unsuccessful

endoscopic extraction required surgical removal of the foreign bodies; all of these were adults. The types of foreign bodies were coins in children and dentures in the elderly.

Morbidity rate observed in the study was 4.5% due to perforation during rigid oesophagoscopy observed in 9 cases. Five of these 9 patients underwent surgery for repair of oesophageal perforation, while the remaining four were treated conservatively. Of the five cases needing surgery, 3 were children who underwent pediculated flap repair of the perforated oesophagus, while 2 patients of oesophageal carcinoma underwent oesophageal resection (gastroesophagectomy).

The mortality rate was 1.5% due to septicemia in 3 cases. Two of these were children who had undergone flap repair and one was an elderly lady who underwent resection.

DISCUSSION

Rigid oesophagoscopy has proved an invaluable tool for a variety of oesophageal diseases presenting as dysphagia,^{3,11} particularly foreign bodies^{12,14-16} and conditions requiring biopsies and dilatation.⁷⁻¹⁰

The present audit documents 200 cases of rigid oesophagoscopy for a variety of oesophageal diseases carried out over a three year period at the Lady Reading Hospital Peshawar; compared to many other regions of the world, this indicates an increased rate of oesophageal diseases requiring rigid endoscopy.^{14,15} However this rate is not discordant with the presumed rates for other parts of the country as documented by another study,⁴ or from some other developing countries.^{17, 18}

Although the indication for rigid oesophagoscopy was dysphagia, as is the routine, the underlying causes of dysphagia were widely divergent from other reported studies, where foreign bodies in children constitute the most common cause for both dysphagia and rigid endoscopy.⁴⁻⁶ In the present study, oesophageal carcinoma was the underlying cause in 57.5% of cases followed by strictures of various aetiologies (37.5%), while foreign bodies formed only 5% of the cases. Moreover the adult age group was represented much more than the paediatric ages, so that adults between the ages of 21-70 years formed 79% of the cases; this represented the majority of cases suffering from dysphagia related to either strictures of various types or oesophageal carcinoma.

The procedure was fairly successful in all the major indications for its use, achieving positive biopsies at the first attempt in 75% of carcinoma

cases, achieving successful dilatation in benign strictures on the first attempt in 70% of cases and removing foreign bodies at the first attempt in 70% of cases. All unsuccessful cases in any category were complicated conditions requiring either multiple attempts or more definitive treatment such as surgery.

Morbidity associated with the procedure was related to perforations occurring in 9 (4.5%) cases, all of whom were adults with oesophageal carcinoma, a known risk factor for endoscopic oesophageal perforation.^{7,17,19,20} Our morbidity rate was in keeping with that reported by others.

The mortality of three cases (1.5%) in this study was an indirect consequence of the endoscopic procedure, being the result of septicemia acquired in the postoperative period by these 3 complicated cases; two of these were children and one an elderly lady with malignant disease.

To conclude, it can be said that rigid oesophagoscopy is a safe and successful procedure in skilled hands; however the study indicates that there is a fairly high occurrence of oesophageal diseases, particularly oesophageal carcinoma in the elderly and strictures in adults in our setting, requiring rigid oesophageal endoscopic intervention.

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Address for Correspondence:

Dr. Asif Nadeem, Cardiothoracic unit, Lady Reading Hospital Peshawar Pakistan.

Email: nadeemct@hotmail.com