TRANSHIATAL OESOPHAGECTOMY FOR CARCINOMA OESOPHAGUS EARLY EXPERIENCE

Pages with reference to book, From 129 To 131

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ABSTRACT

Over a period of eighteen months, (June, 89 to Dec, 90)19 patients underwent Transhiatal Oesophagectomy for carcinoma. Thirteen were males and 6 females, age varying from 32 to 80 years with an average of 48.6 years. Dysphagia was present in all patients, the duration varied from 1.5 to 6 months, average 3.5 months. Pre-operative endoscopy and biopsy was done in all cases. Lesion was located in upper thoracic oesophagus in 6, middle 9 and lower 4. Histology revealed squamous cell carcinoma in 18 and adenocarcinoma in one. Transhiatal oesophagectomy without thoracotomy and cervical oesophagogastric anastomosis was carried out. The stomach was placed in the posterior mediastinum in 13 and retrosternal in &cases. Liver metastasis were present in 3, palpably enlarged nodes in 7 and the tumor was adherent to tissues in the mediastinum in 6 cases. Four patients died in hospital, 2 due to myocardial infarction, one due to massive haemetemésis, and the cause of death could not be established in one. Satisfactory relief of dysphagia was achieved in all cases. Oesophagectomy without thoracotomy is safe and better tolerated than the traditional trans-thoracic operations. The experience of one surgical unit is presented (JPMA 41:129, 1991).

INTRODUCTION

In the past 50 years the surgical treatment of the carcinoma oesophagus has evolved from the stage of experimental surgical procedure to that of a well defined surgical technique[1] - Despite improvement in preoperative evaluation, anaesthetic and operative techniques, postoperative care, oesophageal resection and reconstruction remain formidable operations in patients whose nutritional and pulmonary status has been compromised by impaired swallowing[2]. The necessity of a combined thoracoabdominal procedure in a debilitated patient and the disastrous results of disruption of an intrathoracic anastomosis are major contributing factors to the morbidity and mortality rate of oesophageal surgery[2]. Continuing efforts to reduce morbidity and mortality rates for oesophageal resection and reconstruction prompted the technique of transhiatal oesophagectomy in patients with both benign and malignant disease requiring oesophageal replacement. By eliminating the need for a thoracotomy this procedure tends to reduce the operative physiological insult to the patients and the disastrous results of disruption on intrathoracic anastomosis, producing mediastinitis, is less troublesome, and suture line recurrence is less[3]. Additional advantages of transhiatal oesophagectomy are that a subtotal oesophagectomy is accomplished removing almost the whole oesophagus, the oesophago-gastric anastomosis is in the neck, which is relatively easier to perform than a anastomosis high in the chest and the “margin of resection” has a better chance of being free of tumour. Considering the above mentioned advantages transhiatal oesophagectomy has been adopted as a procedure of preference for carcinoma oesophagus in this study.

PATIENTS AND METHODS

Between June 1989 and December 1990 a total of 19 patients underwent transhiatal oesophagectomy in cases of carcinoma oesophagus. One patient had a history of carcinoma pyriform fossa for which he had received radiotherapy one year back. One patient had radiotherapy preoperatively before being referred for surgery. One patient returned one year after oesophagectomy with obstructive jaundice which turned out to be due to hilar cholagiocarcinoma oply palliative left hepatico-jejunostomy was possible. In all cases oesophageal resection and reconstruc tion were performed in a single stage. Awaiting surgery, additional nutrition was provided by parenteral or tube feeding. Dehydration and anaemia were corrected. The operative technique is based on that described by Grey- Turner[4], Le Quesne and Ranger[5] and modified for carcinoma oesophagus by Kirk[6] and Orringer[3]. Post-operatively the patients were managed in the surgical ward. Due to lack of a surgic3l intensive care unit all patients were managed without ventilatory support.

RESULTS

Of the 19 patients, 13(68.4%) were males, 3(31.5%) females, age ranged from 32 to 80 years, with an average of 48.6 years. Forty two percent were below 50 years. Dysphagia was present in all cases with an average duration of 3.5 months. Barium study, endoscopy and biopsy was carried in all cases who underwent oesophagectomy. Histopathology revealed squamous cell carcinoma and adenocarcinoma in 94.7% and 5.2% respectively. The lesion was present in upper thoracic oesophagüs in 6, middle third in 9 and lower third in 4 cases. Liver metastasis were present in 3 (15.8%), palpably enlarged lymph nodes were present in 7 (36.8%) and the tumor was adherent in the posterior mediastinum in 6 (31.5%). Resection was carried out in all these cases. The stomach was used as a conduit and was placed in the posterior mediastinum in 13 cases and retrosternally in 6. Bleeding was not troublesome in any patient. Transfusion required during the operation or postoperatively varied from 500 to 1500 mIs., the average was 1000 min. None of the patients required thoracotomy during the operation or postoperatively. The average postoperative hospital stay was 15.3 days. Overall complications were few and easily managable. Of 5 (26.3%) cases who had complications, 2 developed pleural effusion requiring aspiration, one laryngeal nerve pariesis which recovered in six weeks, and one needed dilatation of the anastomosis. All patients were able to take a normal diet at the time of discharge. One patient developed an anastomotic leak. There were no deaths directly related to the technique. Four (2 1%) patients died during the hospital stay. One patient had massive upper G.I bleeding on the 12th postoperative day when she was having food. One patient, 32 years old who had secondaries in the liver died on the 5th operative day. Two patients died of myocardial infarction on the 4th post-operative day, both males, one was 75 years old and the other 80.

DISCUSSION

The exact incidence of carcinoma oesophagus in Pakistan is not known. One study shows it to be the 8th commonest cancer in the male and 5th commonest in the female[7]. The age of patients is usually over 60 years[8]. In Pakistan ag,e range in males is 50 to 59 and in females 40 to 49 years[7]. Males are almost invariably more commonly afflicted than females. The incidence varies from 10:1 to 1:1[9]. In our series the male to female ratio was 2:1. It is known that alcohol and tobacco play an important role in the pathogenesis of oesophageal carcinoma. Increasing the number of cigarettes smoked or larger amount of alcohol consumed correlate positively with increasing risk of developing oesophageal carcinoma[10]. Alcohol is not commonly used in our country but 12 of our patients had history of tobacco use in one form or another. The clinical history is characteristic in all but a few patients. The patients, usually in advancing years, complain of progressive difficulty in swallowing and rapid loss of

weight. Occasionally sudden and complete dysphagia results from impaction of food[11]. Dysphagia was present in all of our cases. Only 2 patients complained of anorexia while all others had a normal appetite. The average duration of symptoms prior to diagnosis in England is 7.5 months[9], in our cases it was 3.5 months. Squamous cell carcinoma in the oesophagus is more frequent. Eighteen cases in this series had squamous cell carcinoma, one had adenocarcinoma. There are various operative procedures available for carcinoma oesophagus and they vary from a two stage thoracoabdominal to a three stage oesophagectomy with a cervical anastomosis. Morbidity and mortality from such procedures are high. Continuing efforts to reduce the morbidity and mortality for oesophageal resection and reconstruction prompted the technique of transhiatal oesophagectomy without thoracotomy in patients with both benign and malignant disease requiring oesophageal replacement. The earliest was by Grey -Turner[4], By eliminating the need for a thoracotomy, this procedure reduces the operative physiological insult to patients[3]. Transhiatal oesophagectomy is safe, associated with low morbidity and achieves excellent palliation and survival at least as good as that reported in many series of transthoracic oesophagectomies for oesophageal carcinoma[12]. Oesophagectomy without thoracotomy was done in all cases in this series and none of them required thoracotomy during the operation or postoperatively. In all cases the oesophago-gastric anastomosis was done in the neck. Cervical anastomosis is not associated with the disastrous results of disruption of a intrathoracic anastomosis, producing medistinitis. Reflux is less troublesome and suture line recurrence is less[3]. Additional advantages of a cervical anastomosis are that almost the whole oesophagus is removed, the anastomosis in the neck is relatively easier to perform than anastomosis high in the chest and in tumors of the middle or upper thoracic oesophagus a safer margin of clearance is achieved. Anastomotic leakage in the chest is responsible for more than half postoperative deaths after oesophageal cancer surgery[13]. Following transhiatal oesophagectomy the stomach was placed in the posterior mediastinum in 13 cases without, and in the retrosternal position in 6 with extension of tumor in the mediastinum. This was done to avoid recurrent malignant dysphagia due to involvement of the oesophageal substitute as the recurrence of dysphagia is a major disappointment[14]. Out of four patients who died postoperatively, two died of myocardial infarction. Both were males. One was 75 years old and the other 80 years. Mortality rate is known to be greater in patients over 70 years than in younger patients[15]. Transhiatal oesophagectomy without thoracotomy is a safe and effective means of removing diseased oesophagus. It is associated with far less physiological, insult to the patients than the more traditional combined transthoracic and abdominal approaches. Thoracotomy is unnecessary in the majority of patients requiring oesophagectomy and it’s avoidance is rewarded by fewer complications and more rapid mobilization of the patients.

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