References


Motility Disorders of the Oesophagus

Sir,

The recent review article by Dr M. I. El-Mouzani on oesophageal motility disorders (EMD) was interesting (Saudi Med J 1992; 13(4): 275–282). I wish to share my experience in this field.

We, at the Institute of Medical Sciences (Kashmir, India) studied the role of oesophageal manometry in the diagnosis and follow-up of primary oesophageal motility disorders. The gastroenterology division at the institute has the privilege of having one of the few established manometry laboratories in the region.

Kashmir is one of the areas of the world where carcinoma of the oesophagus is one of the commonest malignancies. The majority of these patients present with dysphagia as the predominant symptom. We evaluated the patients in whom oesophageal carcinoma or other obstructing lesions were not the cause of dysphagia. A great bulk (approx. 80%) of this subgroup proved to have a primary oesophageal motility disorder (POMD) as the cause of their dysphagia.

The patients were extensively questioned regarding their dysphagia and accompanying symptoms. The baseline investigations e.g. haemogram, chest X-ray, ECG and barium swallow were performed in all cases. This was followed by upper gastrointestinal (UGI) endoscopy to rule out mechanical obstruction. The suspicious cases, in whom history, barium X-ray and endoscopy were not suggestive of any obstructing lesions or did suggest a functional disorder, were subjected to oesophageal manometric studies (EMS).

In the manometry laboratory we have a special multilumen oesophageal polyvinyl catheter system designed by Narcobiosystem (Texas, USA). Catheters are perfused constantly with distilled water at a flow rate of 0.5 ml/min by means of an improved hydraulic capillary system. Four groups of study patients were prescribed nifedipine with or without isosorbide dinitrate (10 mg twice daily to 10 mg three times daily each) and were followed-up for clinical and manometric results every 2 weeks. These four groups of patients included those with achalasia cardica, diffuse oesophageal spasm (DOS), ‘nutcracker’ oesophagus and hypertensive lower oesophageal sphincter (HLES).

The sixty-three patients were classified manometrically according to the Benjamin et al. classification1 as follows:

Oesophageal motility disorder  No. of cases %
1. Achalasia of the cardia (classic)  4  6.3
2. Achalasia of the cardia (vigoroso)  3  4.8
3. Diffuse oesophageal spasm (DES)  5  7.9
4. ‘Nutcracker’ oesophagus (NCE)  11  17.5
5. Hypertensive LES  9  14.2
6. DES variant  10  15.9
7. Cricopharyngeal dysphagia  6  9.5
8. Presbyoesophagus  2  3.2
9. Unexplained dysphagia  13  20.7
TOTAL  63  100%
In addition to dysphagia, other symptoms included chest pain (which was marked in patients of NCE and DES), weight loss and aspiration pneumonia, especially in advanced achalasia. The chest X-ray showed absence of fundal gas, air–fluid level in three cases of achalasia and evidence of aspiration pneumonia in one case of achalasia. The barium radiology showed characteristic findings in majority of cases.

Upper gastrointestinal endoscopy revealed residual food and secretions in the oesophagus of achalasia patients as well as dilatation of proximal oesophagus and resistance to the passage of endoscope at the lower end. Oesophageal manometry proved to be the most useful diagnostic tool, establishing the diagnosis in 50 (79.4%) patients. These diagnoses met all the criteria required for their manometric definition. In particular, the diagnosis of ‘nutcracker’ oesophagus in 11 (17.5%) patients was purely manometric with normal radiological and endoscopic findings. This entity has lately been described with increasing incidence in patients with non-cardiac chest pain, various studies reporting incidence in the range of 20–30%. The relatively lower incidence in our study is due to the fact that we selected patients with dysphagia as the main symptom, not the chest pain of non-cardiac origin. These patients showed tall, peaked contractions (+120 mmHg) and/or prolonged waves (+5.5 s) with normal lower sphincter and normal peristaltic sequence.

In achalasia patients, the manometric findings included absence of or inadequate relaxation of LES in response to a swallow and absence of normal peristaltic pattern. Some of these patients showed hypertensive LES as well. Patients with vigorous achalasia showed combined manometric features of achalasia and DES. DES patients showed normal LES pressure and relaxation. The finding of prolonged, repetitive, simultaneous-onset and spontaneous contraction waves was, however, uniformly observed in all patients.

The response to drugs was noted clinically in the form of:
1. Change in severity and frequency of dysphagia episodes.
2. Ability to swallow solids without the help of liquids.
3. Decrease in severity/frequency of chest pain episodes. The response was graded arbitrarily as:
   a. Excellent: +75% relief of symptoms
   b. Good: 50–75% relief of symptoms
   c. Fair: 25–50% relief of symptoms
   d. Poor: <25% or no response.

Manometrically, short-term improvement in the relaxation of LES, decrease in resting LES pressure and decrease in amplitude of tall, peaked contractions in response to smooth muscle relaxants were significant findings. The follow-up period ranged from 6 months to 24 months. The majority of patients with ‘nutcracker’ oesophagus showed a fairly good response to smooth muscle relaxants. The patients with hypertensive LES, achalasia of the cardia and DES also showed fair responses.

This study emphasizes an important role of oesophageal manometry in the diagnosis of oesophageal motility disorders which are the cause of dysphagia and/or non cardiac chest pain in a significant proportion of patients attending any GE clinic. Moreover, smooth muscle relaxants e.g. nifedipine seem to ameliorate symptoms in many patients of NCE, hypertensive LES and early cases of achalasia cardia and DES. Investigations like cineradiology and scintigraphy are required to pick up more cases from the group of ‘unexplained dysphagia’.

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Fat Consumption among Students at General Organization of Technical Education and Vocational Training, Riyadh

SIR,

In 1989, a survey was conducted over 4 months to determine the dietary intakes of healthy, young (16–25 years of age), male and full-time students at General Organization of Technical Education and Vocational Training, Riyadh. By using ‘diet history’ and ‘diet diary’ to assess the usual weekly intake (UWI) and actual daily intake (ADI), respectively, a random sample of 508 students was asked to provide information about their dietary intakes (Al-Sudairy A, unpublished PhD thesis; 312 responded (61.4%). Data related to fat consumption showed that total fat intake of these students was high (Table 1).

This result is alarming because it is known that the national fat consumption is associated with national death rates from coronary heart disease (CHD).1 Saturated fatty acids (SFA), in particular, have the closest association with CHD perhaps because they correlate closely with serum cholesterol level; high cholesterol level is well known risk factor for CHD, though not the only one.2 The average daily intakes of SFA among our population is greater than that of British people.

References


SIR,

I would like to thank Dr Khan for his interest in my article and for sharing his experience with the readers of the *Saudi Medical Journal*.

It is widely accepted that motility disorders of the oesophagus are not the most common causes of dysphagia. Consequently, the initial investigation of these patients is not oesophageal manometry but other diagnostic measures to exclude the more common obstructive lesions of the oesophagus (carcinoma, strictures, etc.). However, appropriate investigations of patients with dysphagia, who do not have obstructive lesions, indicate that primary motility disorders are the most common causes of their dysphagias. These points are illustrated in Dr Khan’s letter which indicates that in about 80% of the patients with non-obstructive dysphagia, manometry identified primary motility disorders. Therefore, I agree with Dr Khan that manometry is the best diagnostic tool in this group of patients and that this procedure which is not yet widely available in the Kingdom, should be part of gastroenterology services in major hospitals.

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