BANGLADESH MEDICAL REVIEW Jan. - June 1992

VOL. XVIII NO. 1

NON ULCER DYSPEPSIA - A STUDY OF 100 CASES.

DR. RASHIDUL HASSAN
MBBS, FCPS
Resident physician, Shere Bangla Medical College Hospital, Barisal

DR. NASIRUDDIN AHMAD
MBBS, M Phil
Assistant Professor, Pathology, Shere Bangla Medical College, Barisal.

DR. GHULAM MAHMOOD
MBBS, FCPS.
Senior Consultant, General Hospital, Barisal.

SUMMARY:

100 cases of non ulcer dyspepsia (NUD) were studied clinically and available laboratory investigations. The patients were selected on the basis of manifestations of dyspepsia in the absence of any demonstrable organic lesion. The commonest age group involved was 20-30 yrs. Gastroesophageal reflux like dyspepsia appeared to be the commonest type. Single contrast radiologic examination of stomach and duodenum was found to be of little use in the diagnosis of NUD.

INTRODUCTION:

Dyspepsia is a very common medical problem. Almost every one, sometimes or other, has suffered from it during his life time. Majority of the gastroenterology and considerable portion of the general practice involve management of cases of dyspepsia. But interestingly no organic lesion can be identified in half of the cases. These cases are categorized under a recently introduced term non ulcer dyspepsia (NUD) and a shift of emphasis on management of nonulcer dyspepsia is noticed in gastroenterology practice. Obviously NUD is a very common medical problem and even more common than true dyspepsias. In Bangladesh one study suggested that 41.4% of the population are suffering from peptic ulcer dyspepsias of which only 47.4% revealed some underlying organic cause while the rest are nonulcer dyspepsias [1]. The present study was undertaken to highlight the clinical aspects of NUD.

MATERIALS AND METHODS:

This study was carried out at Barisal town between Sept. 1990 to May 1991. Patients were selected from private clinics and those attending the Shere Bangla Medical College Hospital, Barisal. For the purpose of study dyspepsia was defined as epigastric and/or retrosternal pain and/or heartburn as the primary symptoms for at least three months duration and with at least one episode per week. A partial or complete relief of pain by antacid was also considered a essential prerequisite. Careful clinical examination and laboratory investigation was performed in each patient to exclude the specific cause of dyspepsia, cholelithiasis, peptic ulcer, carcinoma stomach etc. Patients were excluded from this study if they were pregnant or had complications of peptic ulcer or had irritable bowel syndrome or dysphagia. Patients were also excluded from this series if they had been taking

BANGLADESH MEDICAL REVIEW

VOL. XVIII NO. 1 Jan. - June 1992

steroids, bronchodilators nonsteroidal anti inflammatory drugs or if they had significant abnormal cardiac, renal or hepatic functions.

Presence of certain risk factors such as smoking, family history, personality type etc were evaluated during history taking and recorded.

Ultrasonography was done in all patients to exclude any possible underlying cause of dyspepsia.

Barium meal X-ray and endoscopic examination of the stomach and duodenum were performed in each patients to findout any specific cause of dyspepsia.

RESULTS.

Age and sex: Of the 100 cases 68 were male and 32 females. The age of the patients varied between 12 to 65 yrs with a commonest age froup 20-30 yrs. These are given in the following table (Table-1)

Age group	Male	Female	Total
below 20 yrs	12	6	18
20 to 30 yrs	36	14	50
31 to 40 yrs	14	4	18
41 yrs & above	6	8	14
Total	**68**	**32**	**100**

Table-1 Age and sex distribution of 100 cases of nonulcer dyspepsia.

Risk factors : The presence of risk factors were evaluated from history of the patients. It was found that these risk factors though less frequent than peptic ulcers' are present in NUD patients. The distribution of the risk factors are given in the following table (Table-2).

Risk factors	No. of the patients showing the risk factor	
1. Smoking	41	41%
2. Family history of dyspepsia	24	24%
3. Personality type-A	48	48%
Total	**100**	

Table-2 Showing the distribution of the risk factors in the NUD Patients.

Presentation: NUD cases were grouped according to the known presentations of NUD. Gastroesophageal reflux like dyspepsia (GERD) appears to be the most frequent one (46%). The distributions of the other categories are given in the following table (Table-3).

Clinical type of NUD	No of cases	%
1. Gastroesophageal reflux like dyspepsia (GERD)	46	46%
2. Dysmotility type	32	32%
3. Ulcer - type	12	12%
4. Idiopathic	10	10%
Total	**100**	

Table-3 showing the clinical pattern of the NUD cases.

Investigations : The findings of the barium meal x-ray (single contrast) are tabulated in the following table (Table-4). It is rather surprising to note that in the absence of any organic lesion in the stomach or duodenum barium meal examination has yeilded false positive findings in 86% of the patients. And normal findings (consistent with the diagnosis of NUD) were found in 16% of the cases. Deformed cap was the commonest false positive findings recorded observed in our series. The spectrum of the radiologic findings are given in the following table (Table-4)

Findings	No of cases	%
1. False positive findings		
Deformed cap	58	
Chronic DU	24	86%
Carcinoma stomach	2	
2. Normal findings	16	16%
Total	**100**	

Table-4 showing the distribution of the radiologic findings of the NUD cases.

DISCUSSION:

The importance of Nonulcer dyspepsia (NUD) cannot be over emphasized. As stated earlier it is observed that 47% of the population suffers from peptic ulcer dyspepsia while only 15% have actual ulcers (1) . And obviously majority of these cases are NUD. These large volume of patients have significant socioeconomic implications. The socioeconomic implications of NUD were studied in Sweden where the cost of patient care for dyspepsia was estimated about 17 million US dollars (2) and the cost of loss of earnings and sick leave benefits are taken into account the annual cost rises to 183 million US dollars (2). In Bangladesh the actual stastistics are not available but having a population ten times than that of Sweden the economic loss because of NUD must be considerable.

Clinical suspicion is very important in the diagnosis of NUD. This is particularly so in our country where the facilities for endoscopic examination is available only in specialized centre. Symptoms and age of the patient help the clinical suspicion of NUD. The age incidence of the present series agrees with the general idea that NUD is relatively more prevalent in younger age group though no age group is spared (2). The commonest age group in our series is 20 - 30 yrs. Based on symptoms it is possible to group NUD cases into four categories. Gastroesophageal reflux like dyspepsia (GERD) is the commonest. Also in our series nearly half of the patients belonged to this categories. The clinical types included in our series are briefly discussed in the following paragraphs.

a. Gastroesphagel reflux like dyspepsia (GERD). This is characterized by substernal and epigastric discomfort and heartburn; a burning upper epigastric regugitation of acid or occasionally food. Meals, hot drinks or change of posture may aggravate these complains.

BANGLADESH MEDICAL REVIEW

VOL. XVIII NO. 1 Jan. - June 1992

b. Dysmotility type : This type is associated with a feeling of flatulence bloating and distension, meteorism and early satiety. Patient tend to feel hungry yet are abnormally full after consuming only a small portion of his meal.

c. Ulcer like dyspepsia: This variety of NUD mimicks features of ulcers - i.e. being awaken up by pain at night, setting relief of pain after antacids or small meals.

d. Idiopathic or essential : This group also characterized by symptoms related to upper gastrointestinal tract but does not fit to any of the above categories.

The results of the radiologic examination of stomach and duodenum of this series presents an obvious paradox. It is generally held that with standard technics the diagnostic accuracy of single contrast barium meal examination approaches 80%. But in our series the accuracy of radiologic findings against the endoscopic control is only 16%. So, in 84% occasions the report shows false positive errors. It is very difficult to exalain this. Most likely this has resulted from lack of standard facilities for barium meal examination in most of the places.

The search for understanding the mechanism of production of symptoms in NUD has always been challenging and interesting. Intense investigations were devoted to unravel the pathophysiology of NUD i.e. how the symtoms are produced in the absence of organic lesion. But yet today the mechanism remain poorly understood. However, sevaral investigators have suggested different mechanisms for origin of symptoms of NUD. These are given below briefly.

Gastric acid secretion : Several studies have failed to identify any consistent difference between the normal subjects and NUD patients regarding basal acid output, maximum acid output and acid secretion in response to stimuli [3].

Gastritis and duodenitis : Recently has been shown that there are increased number of neutrophils in biopsy specimens from the stomach of NUD patients. Suggesting the possiblity of inflammation [4].

Helicobacter pylori : Acute infection of stomach with Helicobacter pylori is short lived and may produce dyspeptic symptoms [5,6] wheather chronic infection may underlie the mechanism of NUD is uncertain.

Motility : Half of the NUD patients show dysmotitity like-delayed gastric emptying and antra hypomotility [7].

Food Allergy : Some investigators have suggested the possibility of food allergy or intolerance to foods as cause of symptoms of NUD [8,9].

Duodeno gastric reflux : Reflux of doudenal contents specially bile has been implicated in some patients with dyspepsia. But the evidences for such effects is yet not conviencing [10].

Psychological factors : The NUD patients appear to be slightly more neurotic in contrast to nondyspeptic population [11]. Unlike peptic ulcer patients, whose absence from work is mainly due to abdominal complains, Patients with NUD reports various associated problems dominated by musculoskeletal pains. These patients also have a low pain threshold. These patients may have hightened perception of physiological function, but this aspect is very difficult to ascertain because of many varied uncontrollable factors are involved [12].

REFERENCES :

1. Khan A K A, Hassan M, Roy P K. et al. Peptic ulcer in Bangladesh. Bangladesh Med Res Counc Bull, 1986. 13(1): 29-41.
2. Report of working party : Management of dyspepsia. The Lancet 1988 : 576 - 578.
3. Nyren O, Adami HO, Gustavson S, Lindgren PG, Loof L, Nyberg A. "The epigastric disterss syndrome" a possible disease entity identified by history and endoscopy in patients of non ulcer dyspepsia. J Clin Gastroentorol, 1987. 9: 303-9.
4. Cheli R, Perraso A, Giacosa A. Dyspepsia and chronic gastritis Hepatogastroenterology 1983; 30: 21-23.
5. Marshal B, Armstrong JA; Glancy RJ. Attempt to fill koch's postulates for pyloric campylobacter. Med J Austr, 1985 : 36-39.
6. Rathbone Bj, Wyatt J, Heatly RV. Canpylobacter pyloridis- a new factor in paptic ulcer disease ? Gut 1986; 27: 635-41.
7. Malagelada JR, Stanghelim V, Manometric evaluation of functional upper gut symptoms, Gastroenterology 1985; 88: 1223-31.
8. Royal College of Physicians/British Nutrition Foundation. Food intolerance and food aversion. A joint report of the Royal College of Physicians and British Nutrition foundation. J R Coll Physns Lond 1984; 18: 123.
9. Pearson DJ. Food allergy, hypersensitivity and intolerance. J R Coll Physn London 1985; 19: 154-162.
10. Watson RGP, Love AHG. Intragastric bile acid concentrations are unrelated to symptoms of flatulent dyspepsia in patients with or without gall bladder disease and postcholecystectomy. Gut 1987; 28:131-136
11. Nyren O, Admi HO, Gustavson S, Loof L. Excess sick-listing in nonulcer dyspepsia. J Clin Gastroentorol 1986; 8:339-45.
12. Talley NJ, Fung LH, Gilligan IJ, McNeilo D, Piper DW. Association of anxiety and deperssion with dyspepsia of unknown cause. Gastroenterology 1986; 90: 886-92.