

**Gastroesophageal reflux among
acute unexplained chest pain patients in a
selected centre**

By

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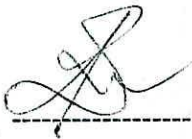
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We certify that the above statement made by the candidate and true and that this thesis is suitable for submission to the University of Sri Jayawardenepura for the purpose of evaluation



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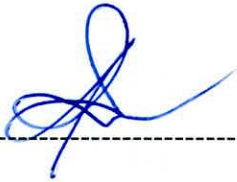


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Abbreviations

CAD - coronary artery disease

ECG - electrocardiogram

GOR - gastroesophageal reflux

GORD - gastroesophageal reflux diseases

IHD - ischaemic heart disease

LBBB - left bundle branch block

LES – lower oesophageal sphincter

NCCP – non cardiac chest pain

NERD - negative-endoscopy reflux disease

OD - oesophageal dysfunction

UBD - unexplained breathing disorder

UCP - unexplained chest pain

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ABSTRACT

Chest pain without a definitive aetiology is a common clinical problem and is categorised as non-cardiac or unexplained chest pain (UCP). Gastroesophageal reflux disease (GORD) is the commonest oesophageal disorder in patients with UCP. GORD is diagnosed by oesophageal pH monitoring. There are no reported studies on oesophageal pH monitoring of acute chest pain patients. The aim of this study was to determine the gastroesophageal reflux (GOR) among acute UCP patients and to describe their symptoms.

A total of 247 chest pain patients were recruited for the study till 75 UCP patients were found. Selection criteria for UCP were chest pain with no definitive diagnosis after history and examination, no ischemic changes in the ECG, negative Troponin test and on going chest pain till pH study was performed. A questionnaire was administered to obtain information about chest pain. Oesophageal pH monitoring was done by Synectic Digitrapper Mk III ambulatory pH monitor for 15 min in the supine position and 15 min in the seated position. GOR was diagnosed if the pH was < 4. Upper gastrointestinal endoscopy was performed on patients with GOR.

Of the 247 patients analysed, IHD was diagnosed in 80 patients. Out of them ECG changes suggestive of ischaemia were found in 69 patients and Troponin test was positive in 19. Muscular type of chest pain was diagnosed in 40 patients, dyspepsia in 29 patients, respiratory diseases in 24 patients and other diagnoses in 7 patients. Eight

patients had both IHD and dyspepsia on admission. UCP was found in 75 patients. Mean age of the total 247 sample was 51.44 (SD 16.89) years and 43.40 (SD 12.60) years in 75 UCP patients. Mean ages of 9 patients with GOR and 66 patients without GOR were 37.89 (SD 13.12) years and 42.82 (SD 13.11) years, respectively. Out of the UCP patients 39 (52%) were females. Oesophageal pH recordings revealed that 12% (9/75) had GOR. The mean duration of the chest pain was 33.74 (SD 106.32) hours in the total sample and 8.94 (SD 8.96) hours in UCP patients ($P < 0.001$). The mean chest pain durations of GOR and non GOR patients were 11.56 (SD 12.04) hours and 8.58 (SD 8.85) hours respectively ($P = 0.32$). In the total sample 59.1% had central, 34.4% had left sided and 16.2% had right sided chest pain. The UCP group had higher percentage (65.33%) of central chest pain. All the GOR patients described their pain as central. Of the total sample 67.2% expressed the chest pain as tightening in nature. All GOR patients and 78.66% of UCP patients had tightening chest pain. Only 13.33% of UCP group had burning type of chest pain. None of the GOR patients had burning chest pain ('heart burn'). Palpitation was not found in UCP patients. Past history of IHD was found in 38.1% of the total sample, 46.66% in UCP patients, and 22.22% in GOR patients. None of the GOR patients had oesophagitis on endoscopy, 55.6% had normal endoscopy and 44.4% had gastritis.

One third of the chest pain patients did not have an aetiological diagnosis (UCP). UCP patients had lower duration of chest pain. Minority (12%) of the patients with UCP had gastroesophageal reflux. Symptom of heart burn was not associated with GOR. Chest pain away from the centre makes GORD a less likely aetiology. Presence of palpitation and dyspnoea favour an alternative diagnosis other than GORD.