

## Burning sensation in the throat – should it be named caloripharyngeus?

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### Abstract

A burning sensation in the throat is often complained of by patients, but this symptom has been neglected in the literature. To emphasize its importance, should we give the name 'caloripharyngeus' to the symptom of burning in the throat? A preliminary study of 30 patients with the sensation of burning in the throat is presented in this study. Of the patients studied 73.33 per cent had hyperacidity detected for the first time. Reflux was presented in only one patient; four patients showed oesophagitis in the lower one-third of the oesophagus; 90 per cent of the patients responded to antacids. We suggest that one of the causes of burning in the throat is a referred sensation due to hyperacidity.

**Key words:** Pharynx; Gastro-oesophageal reflux

### Introduction

One often comes across patients having the sensation of burning in the throat. They may get relief with empirical treatment using antacids, but antibiotics often aggravate the symptom. While reviewing the literature of the last 30 years, we did not come across any study on the symptom of burning in the throat. Should we give a status to this well known but neglected symptom by calling it 'caloripharyngeus'?

### Materials and methods

Thirty patients having the symptom of burning in the throat, who visited the Otolaryngology Department of Lokmanya Tilak Municipal General Hospital over a period of 24 months were analysed. Another series of 30 known cases of hyperacidity were evaluated for 'caloripharyngeus'. None of these patients volunteered any information about the sensation of burning in the throat, but on interrogation, 16 (53.33 per cent) patients gave a history of it.

Besides routine interrogation and otolaryngological examination of the patient, a barium oesophagogram was studied radiologically using thick and thin barium. The Trendelenberg position was used in order to detect gastro-oesophageal reflux. Upper gastro-intestinal endoscopy was performed with a flexible

fibreoptic oesophagoscope. Unfortunately the facility of pharyngeal pH monitoring is not available to us. Gastric analysis was done by Kay's augmented histamine test. Gastric secretions were collected early in the morning for studying the basal acid output (BAO). An intramuscular injection of histamine was given; dosage 0.04–0.06 mg/kg, and maximum acid output (MAO) was obtained by collecting gastric secretions 30 minutes after the injection of histamine.

### Results

In our series of 30 patients, 19 were female and 11 male. The age of the youngest patient was 18 years and the eldest 56 years. Twenty-two (73.33 per cent) patients chewed betel leaves, smoked or consumed alcohol. All 30 patients had a burning sensation in their throat: of these, eight (26.66 per cent) patients had retrosternal burning, and four (13.33 per cent) patients suffered from epigastric burning, while 18 (60 per cent) patients did not have associated retrosternal or epigastric burning.

Laryngeal examination revealed erythema of the larynx in four (13.33 per cent) patients. A throat culture was not conclusive. Oesophagoscopy revealed oesophagitis in four (13.33 per cent) patients, and gastritis in two (6.66 per cent) of cases. Endoscopy detected gastric reflux in one (3.33 per cent) of the patients having oesophagitis. Basal acid output (BAO) and maximum

TABLE I

BASAL ACID OUTPUT BY KAY'S AUGMENTED HISTAMINE TEST IN PATIENTS WITH BURNING IN THE THROAT\*

Basal acid output	No. of patients	Percentage
<2 mEq	10	33.33
2–5 mEq	14	46.67
>5 mEq	6	20.00

\*Twenty patients (66.67 per cent) showed BAO >2 mEq ( $p < 0.001$ ).

TABLE II

MAXIMUM ACID OUTPUT BY KAY'S AUGMENTED HISTAMINE TEST IN PATIENTS WITH BURNING IN THE THROAT\*

Maximum acid output	No. of patients	Percentage
<20 mEq	8	26.67
20–40 mEq	16	53.33
>40 mEq	6	20.00

\*Twenty-two patients (73.33 per cent) showed MAO >20 mEq ( $p < 0.001$ ).

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TABLE III  
SYMPTOMATIC RELIEF OF BURNING IN THE THROAT WITH ANTACIDS\*

Relief	No. of patients	Percentage
Good	21	70.00
Fair	6	20.00
Poor	3	10.0

\* $p < 0.001$ .

acid output (MAO) were increased in 20 (66.67 per cent) and 22 (73.33 per cent) cases respectively ( $p < 0.001$ ) (Tables I and II). Gastro-oesophageal reflux was not detected by barium oesophagography in any patient. Of the patients studied 73.33 per cent had hyperacidity, which was detected for the first time in these patients. Out of 30 patients, 27 (90 per cent) responded symptomatically to the therapy for hyperacidity (Table III:  $p < 0.001$ ).

### Discussion

To the best of our knowledge, no study has been carried out exclusively for the symptom of burning in the throat. However, in many presentations for other disorders like hiatus hernia, burning in the throat was one of the symptoms. Hallewell *et al.* (1970) and Stanciu and Bennett (1972) have shown that smoking can decrease the pressure of the gastro-oesophageal sphincter and can lead to gastro-oesophageal reflux with the symptom of burning in the throat. Schroeder *et al.* (1987) have attributed burning in the throat to ectopic gastric mucosa in the cervical oesophagus. Prolonged pH manometry is a very sensitive and specific investigation for gastro-oesophageal reflux. However, the high incidence of false negatives (38 per cent), patient refusal and/or intolerance (12 per cent) and high cost limit its use (Koufman, 1991).

Of our patients with 'caloripharyngeus', 73.33 per cent had hyperacidity, while eight (26.66 per cent) of the patients had normal acid levels. Out of these eight patients, five patients responded favourably to antacids, which suggests that these patients could be hypersensitive to acid. Certain patients have been reported by Donner *et al.* (1966) to have an acid-sensitive oesophagus.

Hyperacidity appears to be one of the causes of burning in the throat. It may cause referred localized burning in the throat, as the pharyngeal musculature as well as the lower end of the oesophagus are supplied by the vagus nerve. Thus, the pathway for misinterpretation of afferent information exists and can explain

referral of symptoms from the region of the cardiac sphincter to the hypopharynx. In a series of 1080 patients with obstruction at the lower end of the oesophagus, Edwards (1976) reported that one-third of his patients wrongly pointed to the neck as the site of the obstruction.

### Conclusions

Many patients with the symptom of burning in the throat, who are so often dismissed as neurotics, may suffer from hyperacidity.

In our series, most of the patients did not have burning in the epigastrium in spite of hyperacidity. Based on this study, it is suggested that one of the symptoms of hyperacidity can be burning in the throat. A new name 'caloripharyngeus' is suggested, so that this neglected symptom may be studied by various authors in the future.

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