GERD-INDUCED COUGH WAS NOT COMMON IN PATIENTS REFERRED TO A PULMONARY CLINIC IN SINGAPORE

Vijo Poulose, Senior Consultant, Changi General Hospital, Singapore

Abstract

Purpose:
GERD-induced cough (GERC) has been reported in Western literature as a common cause of chronic cough. We examined the prevalence and clinical characteristics of GERC in patients referred to a specialist clinic in Singapore
Methods:
Chart review of prospectively identified patients referred to the pulmonary clinic for evaluation of chronic cough. Ours is a 1000 bedded teaching hospital in Singapore. GERC was diagnosed in patients with a) cough ≥ 3 weeks AND b) presence of ≥ one classical symptom of GERD (heartburn, acid regurgitation, excessive bloating and burping). Based on certain criteria, we subclassified GERC into: 1) Likely GERC - where the probability of GERC is high 2) Possible GERC - there was some uncertainty about the diagnosis
Results
Of the 330 patients cases referred for cough over a 6 year period, GERC was diagnosed in 42 patients (13 %). Most (69%) were women with a median age of 53 years. The median duration of cough was 26 weeks. Thirteen patients were in the "Likely" group and 29 in the "Possible" group. Throat signs and symptoms (throat itchiness, globus, constant throat clearing, cobblestoned appearance of the pharynx) were seen in 71% of patients
Conclusions:
GERC was not a common cause of chronic cough. Most patients with GERC were middle aged women with a median cough duration of 6 months. Throat signs and symptoms were a common association
Clinical Implications:
GERC does not seem to be a common cause of cough in Singapore. To our knowledge, this is the first such study in South East Asia

Introduction

GERD has long been recognized as a cause of chronic cough, especially in non-smokers with a normal chest radiograph. The exact incidence is not known and estimates of GERC among pulmonologists vary widely ranging from 0 to 40 %.

To our knowledge, no studies on GERC have been done in Singapore and hence our main objective was to examine the local population.

Methods and Materials

The study was done in Changi General Hospital, which is a 1000 bedded teaching hospital in Singapore. Chart review of prospectively identified cases of chronic cough referred to the clinics of 2 respiratory physicians during the period March 1, 2010 to June 30, 2016 was performed.

GERC was defined as chronic cough with at least one of 3 classical GERD symptoms (heartburn, acid brash, frequent burping caused by excess 'wind' in the stomach).

Although experts like to sub classify non-acute cough into sub-acute (3-8 weeks) and chronic (> 8 weeks), for the purpose of this study, we used "Chronic" to include any cough ≥ 3 weeks.

Exclusion criteria were 1) age < 21 years 2) Prisoners 3) pregnant women

We classified GERC patients into 2 groups;

1) Likely – where the likelihood of GERC is high. These patients had resolution of symptoms after GERD therapy

2) Possible - there is uncertainty about whether GERD is the cause of cough. This included patients who:

a) defaulted follow-up visits before diagnostic testing was completed
b) were non-compliant to treatment
b) failed treatment
c) had other etiologies that could also cause chronic cough (like asthma, upper airway cough syndrome, smoking)

We examined the demographics and clinical characteristics of these patients.

Table 1. All GERC = 42 patients

Gender	Age (years)	Race	Symptom duration	Timing of cough	Throat signs or symptoms
Males 13 Females 29	Median 53 Range 21 to 79	Chinese 28 Malay 7 Indian 4 Others 3	Median 26 weeks Range 4 weeks to 30 years	Anytime 18 Night 17 Day 7	30 patients

Table 2. Likely GERC = 13 patients

Gender	Age (years)	Race	Duration of symptoms	Duration of initial therapy (in weeks)	Timing of cough	Throat signs or symptoms
Males 4 Females 9	Median 49 (IQR 45-59) Range 28 to 69	Chinese 8 Malay 2 Indian 1 Others 2	Median 1 year Range 4 weeks to 15 years	Median 5.5 Range 3 to 13	Any time 5 Night time 4 Day time 4	7

Results

Of the 330 patients cases referred for cough over a 6 year period, GERC was diagnosed in 42 patients (13 %). Most (69%) were middle aged women (median age 53 years). See Tables 1 and 2. The median duration of cough was 26 weeks. 41 patients received a combination of PPI and Domperidone and the one patient got PPI alone. The rationale for adding a promotility agent like Domperidone was to treat any Non-acid reflux. The median duration of initial therapy was 5.5 weeks (range 4 to 9 weeks). PPI was prescribed as high dose Omeprazole 40 mg BD. Domperidone was used in varying doses (10-20 mg tds) for varying periods (2 to 6 weeks).

Seventy one percent of patients had associated throat symptoms or signs (itchy throat, globus, constant throat clearing, "cobblestoned" appearance of the posterior pharynx).

Thirteen patients were in the "Likely" group and 29 in the "Possible" group. The commonest reason for patients to be included in the latter group was the presence of other etiologies that could also have caused the cough

Discussion

GERC is not an easy entity to diagnose or treat. Literature suggests that probably the patients most likely to respond to Proton pump inhibitors are those with classical esophageal symptoms.[1]

In our study done on a large cohort of patients referred for chronic cough. GERD was not seen as a common cause. For obvious reasons, the most valuable information on GERC can be gleaned from the 'Likely' group.

Since it is very difficult to diagnose GERC in the absence of esophageal symptoms, we excluded such patients from our study. Also, there is little evidence that empiric GERD therapy has therapeutic benefit.[2]

We did not include patients diagnosed with Laryngopharyngeal reflux by endoscopy, since there is no strong evidence to support the theory that such reflux is more seen in patients with chronic cough.[1]

Throat manifestations are well recognized in GERD and are attributed to the refluxate bypassing the upper esophageal sphincter. These were seen in majority (71%) of our patients.

Conclusion

GERC was not common in our study. We think our study reflects 'real life' practice and illustrates the problems faced by pulmonologists when dealing with this difficult clinical entity

REFERENCES

1. Smith AJ. Chronic Cough: N. Engl J Med 2016;375(16):1544-1551
2. Kahrilas P. Chronic cough due to Gastroesophageal Reflux in Adults. Chest 2016; 150(6):1341-1360