

## Original Research Article

# An observational study to determine the effectiveness of treatment of dental caries in management of non-specific recurrent/chronic pharyngitis

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## ABSTRACT

**Background:** Chronic pharyngitis is a common inflammatory condition of the pharynx, which has long duration and various etiological factors attributed to it. The most common local constant source of infection causing chronic pharyngitis are rhinitis, sinusitis and laryngopharyngeal reflux. The management for the above etiology is mostly symptomatic. In majority of the cases in spite of symptomatic treatment there is no relief for the patient and the non-specific conditions have to be considered in those cases. One such non-specific condition is chronic dental caries due to poor oral dental hygiene.

**Methods:** A prospective observational study was carried out in the ENT and dental department for over a period of one year at our tertiary care hospital after obtaining institutional ethical committee clearance.

**Results:** 50 out of the 67 patients who had chronic dental caries and who were on chronic medication for non-specific chronic pharyngitis benefitted from dental treatment.

**Conclusions:** Patients with long duration medication for symptomatic treatment of non-specific chronic pharyngitis, if presented along with chronic dental caries, it's recommended to do initial treatment for dental caries management. Awareness has to be created among all individuals about oral dental hygiene.

**Keywords:** Chronic dental caries, Chronic pharyngitis, Oral dental hygiene

## INTRODUCTION

Chronic pharyngitis is a chronic inflammatory condition of pharynx greater than three weeks duration. Various etiological factors are attributed to it and are most commonly due to a local constant source of infection like rhinitis, sinusitis, and laryngopharyngeal reflux leading to inflammation over the posterior pharyngeal wall.<sup>1</sup> Recurrent or non-specific chronic pharyngitis is a condition without any definite etiology.<sup>2</sup> This results in hypertrophy of mucosa, seromucinous gland, sub epithelial lymphoid follicles and also the muscular coat of

pharynx. Various drugs and therapies like mandl's paint, throat gargles, nasal spray and anxiolytics have been used over the decades.<sup>2</sup> Some recent studies show use of honey and clinical effect of acupuncture at eight confluent points as treatment for chronic pharyngitis.<sup>3,4</sup> In majority of the cases in spite of symptomatic treatment there was no permanent relief.<sup>5</sup> The individualized treatment for rhinitis, sinusitis and laryngopharyngeal reflux was followed in clinical practice in treatment for specific chronic pharyngitis.<sup>6</sup> In our study majority of our patients had chronic dental caries due to poor oral dental hygiene. They presented with symptoms of non-specific chronic pharyngitis.

Since dental caries is a constant local source of infection, dental caries management can provide permanent symptomatic relief to the patients. Since there is no study so far which shows the association between chronic dental caries and chronic pharyngitis we decided to study the effectiveness of treatment of dental caries in the management of non-specific recurrent/chronic pharyngitis. Moreover it would help in reducing the cost of treatment by reducing the routine symptomatic treatment for specific type of chronic pharyngitis and also to create awareness for oral dental hygiene not only for all individuals but also for all medical practitioners.

**METHODS**

This prospective observational study was carried out in the ENT and dental department for over a period of one year at our tertiary care hospital from January 2019 to December 2019 after obtaining institutional ethical committee clearance.

**Inclusion criterion**

Patients who were on symptomatic treatment for chronic pharyngitis greater than 3 months and also presented with chronic dental caries.

These patients were referred to dental OPD for the treatment. Treatment of dental caries consisted of procedures like dental filling, dental extraction, and root canal treatment. After the dental treatment patients were followed up for a period of one month and following that patients were asked to fill a questionnaire for improvement of symptoms of chronic pharyngitis and documented.

Statistical analysis was done using chi-square test to study the association between dental procedure and improvement of chronic pharyngitis.

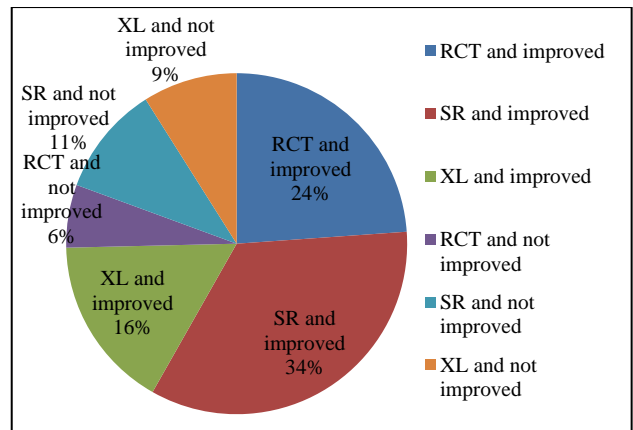
**RESULTS**

Out of the 67 patients included in the study, 50 patients who underwent dental caries treatment showed improvement with symptoms of chronic pharyngitis (Figure 1). All the patients were above 18 years of age with 30 male and 37 female patients (Table 1).

**Table 1: Age and sex distribution.**

Age	Above 18 years (mean age: 30 years)
Male	30 (44.77%)
Female	37 (55.22%)

Statistical analysis was done using chi-square test to study the association between dental procedure and improvement of chronic pharyngitis and p value was found to be less than 0.05 (p=0.000) and it is seen that irrespective of the nature of dental procedure there was significant improvement in chronic pharyngitis.



**Figure 1: Pie chart showing the dental procedure and improvement of chronic pharyngitis.**

**DISCUSSION**

Patients with chronic pharyngitis usually present with symptoms like chronic throat irritation, throat pain, and dry cough due to foreign body sensation of throat.<sup>7</sup> In majority of the cases rhinitis, sinusitis, allergic condition and laryngopharyngeal reflux were specific causes for chronic pharyngitis.<sup>1</sup> It accounts for almost 70 percentages of cases with specific cause. These patients can be misdiagnosed with some diseases such as chronic tonsillitis, chronic laryngitis, pharyngeal and laryngeal tumors, and cervical spondylosis.<sup>8</sup> These patients were treated symptomatically by various drugs and therapies like mandl’s paint, throat gargles, nasal sprays, anti-acid medication, anxiolytics, honey and acupuncture. Even these treatments had no evidence of therapeutic benefits for the patient permanently. All these treatments were aimed in reducing the hypersensitivity mucosa of upper respiratory tract.<sup>2</sup> The remaining 30 percentage of the cases have no specific cause for chronic pharyngitis, however even these patients with no specific cause are treated similarly as chronic pharyngitis with specific cause so as to reduce the hypersensitivity of mucosa of upper respiratory tract. Irrespective of this being chronic pharyngitis with specific cause or non-specific cause they are treated in same way all these years by the ENT specialists across the world. In spite of all symptomatic treatment, majority of patients had no symptomatic relief.

In this study we observed that many patients of chronic pharyngitis with no specific cause also had chronic dental caries. The chronic dental caries is due to practice of poor oral dental hygiene. They were treated symptomatically for chronic pharyngitis more than three months with no permanent benefits. Hence all these patients with chronic dental caries were referred to dental surgeon for management of dental caries and they were followed up for a period of one month. Treatment of dental caries consisted of procedures like dental filling, dental extraction and root canal treatment.<sup>9</sup> It was observed that the 74% patients improved with dental management and they did not have symptoms of chronic pharyngitis and

hence the treatment for the chronic pharyngitis was withdrawn. Since there is no study so far to shows the association between chronic dental caries and chronic pharyngitis. The result in this study is statistically significant stating that there is improvement in non-specific chronic pharyngitis after dental treatment. The study also shows the importance of practice of oral health care hygiene. So in order to promote the health education for oral health hygiene, motivational interviewing is to be practiced at all primary health centers (PHCs) by utilization of Accredited Social Health Activist (ASHA)<sup>10</sup>

## CONCLUSION

Treatment of dental caries plays a significant role in the management of non-specific recurrent/chronic pharyngitis. However other causes of chronic pharyngitis should be ruled out. Proper health education for oral health hygiene should be practiced at all primary health care centers (PHCs).

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