

# Evaluation the Effect of Honey for Control of Infection in Patients with Sore Throat

Effect of Honey for Control of Infection in Patients with Sore Throat

Zia us Salam Qazi<sup>1</sup> and M Irfan ul Akbar Yousufzai<sup>2</sup>

## ABSTRACT

**Objective:** The objective of this study to evaluate the effect of honey for control of infection in patients with Sore throat.

**Study Design:** Case-control study

**Place and Duration of Study:** This study was conducted at the department of ENT of Federal Post-Graduate Institute Shaikh Zayed Hospital, Lahore and Department of Physiology of Islam Medical College, Sialkot from March 2019 to July 2020 for a period of 15 months.

**Materials and Methods:** Patients were randomly assigned to one of two groups: study or control. We had 200 patients in the research group. Left over 200 patients in the control group were put only on antibiotics, anti-inflammatory drugs and gargles without honey. The patients were assessed after 5 days, 10 days, and 15 days after starting the treatment.

**Results:** Both Male and female patients were equal in this study. Honey-using trial participants recovered from sore throats faster than the control group. In terms of individual signs and symptoms, the study group recovered from fever substantially faster than the control group within 5 days. In the study group, indications of oropharyngeal congestion also recovered faster. In both groups, there was no significant difference in the number of patients who were lost to follow-up.

**Conclusion:** Honey prompts quicker recuperation of signs and manifestations of sore throat. Thus, we can infer that admission of honey adjuvant treatment would help patients with sore throat.

**Key Words:** Honey, sore throat, infection

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## INTRODUCTION

In the case of stingless bees, honey is harvested from wild bee colonies or hives of domesticated bees, a procedure known as beekeeping or apiculture. It is reported to have antibacterial as well as wound-healing properties<sup>1</sup> Honey is mostly composed of carbohydrates and water, but it also contains vitamins B and C, as well as a variety of minerals such as calcium, potassium, and zinc.<sup>2</sup>

Beekeeping, or apiculture, is the process of collecting honey from wild bee colonies or hives of domesticated bees.

<sup>1</sup>. Department of ENT, Head, Neck Surgery, Federal Post-Graduate Institute Shaikh Zayed Hospital, Lahore.

<sup>2</sup>. Department of Physiology, Islam Medical College, Sialkot.

<sup>3</sup>. Department of Pathology, Multan Medical & Dental College, Multan.

Correspondence: Zia us Salam Qazi, Asstt. Prof. of ENT, Head, Neck Surgery, Federal Post-Graduate Institute Shaikh Zayed Hospital, Lahore.

Contact No: 0332-3698204

Email: drasnadkhan@gmail.com

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It has been demonstrated that it possesses broad range a ntibacterial properties against pathogenic bacteria and o ral bacteria such as staphylococcus and pseudomonas.<sup>3</sup> Honey is hygroscopic, which means it can absorb moist ure from the air.<sup>4</sup> One of the most prevalent symptoms of patients who attend our ENT outpatient department is a sore throat (OPD). Allergies, reflux illness, nasal discharge, and tonsillitis are only few of the inflammatory and infectious reasons. Honey has been shown to have anti-inflammatory and antioxidant properties in studies.<sup>5</sup> Allergies, reflux illness, nasal discharge, and tonsillitis are only few of the inflammatory and infectious reasons. A sore throat might be caused by a virus or an infection.<sup>6</sup> Local populations have been reported to use honey for pharyngitis and respiratory problems in several investigations.<sup>7</sup> No logical information is accessible in writing in regards to something very similar. Subsequently, we intend to direct this review to see whether honey plays some part as an antibacterial, mitigating, and cancer prevention agent in therapy of sore throat. The target of this study, to assess the impact of honey for control of inflammation and irritation in patients with sore throat.

## MATERIALS AND METHODS

This study was conducted in the department of ENT of Federal Post graduate Institute Shaikh Zayed Hospital, Lahore and Department of Physiology of Islam Medical College, Sialkot from March 2019 to July 2020. The authorization of Institutional Ethical Committee was taken. Patients having a history of diabetes, allergies to pollens and bees, allergies to honey, those who were already receiving therapy for a sore throat, and those who dislike honey were all excluded. The authors of this study examined and followed up on all of the patients. Patients were randomly assigned to one of two groups: study or control. We had 200 patients in the research group. Left over 200 patients in the control group were put only on antibiotics, anti-inflammatory drugs and gargles without honey. The patients were assessed after 5 days, 10 days, and 15 days after starting the treatment.

**Statistical:** SPSS for Windows version 20 was employed for all statistical analyses.

## RESULTS

A total of 400 patients were taken for this study. Complaints of sore throat patients were taken. Data were analyzed after collection. The age of patients 20 years was taken in this study. There was an equal incidence of sore throat in all the age groups. Both Male and female patients were equal in this study. Honey-using trial participants recovered from sore throats faster than the control group. In terms of individual signs and symptoms, the study group recovered from fever substantially faster than the control group within 5 days. In the study group, indications of oropharyngeal congestion also recovered faster. In both groups, there was no significant difference in the number of patients who were lost to follow-up.

**Table No.1: Participant characteristics**

	Honey+ Antibiotics (n=200)	Antibiotics Control (n=200)
Age (years)	20.4 + 15.2	20.3 + 15.3
Male /Female (%)	75/75	75/75
Body weight (Kg)	68.9 + 10.8	67.3 + 11.1
BMI (kg/m <sup>2</sup> )	23.8 + 2.5	23.2 + 2.5

**Table No.2: Time to total recovery from sore throat**

Time Taken	Test (Honey+ Antibiotics) group (n = 200)	Control (Honey) group (n = 200)
<5 days	96	82
5-10 days	62	69
10-15 days	28	33
Not recovered after 15 days	14	16

**Table No.3: Relief of signs of sore throat at initial Visit**

Sign	Test (Honey+ Antibiotics) group (n = 200)	Control (Honey) group (n = 200)
Fever	80	65
Oropharyngeal congestion	200	200

**Table No.4: Patient satisfaction**

Patient satisfaction	Test (Honey+Antibiotics) group (n = 200)	Control (Honey) group (n = 200)
Completely satisfied	170	130
Somewhat satisfied	30	70

## DISCUSSION

This study looked into the role of honey as an anti-inflammatory, antibacterial, and antioxidant agent. The study's goal was to see how effective honey is at reducing inflammation and infection in sore throat patients, as well as how it affects patient satisfaction and any potential side effects. Tonsillitis or pharyngitis can cause a sore throat, which is fairly prevalent in everyone's life.<sup>8</sup> According to Bisno, infective etiology was found in 44% of patients with sore throat.<sup>9</sup> Nine patients (5%) in our trial required hospitalization due to high-grade fever, acute odynophagia, dehydration, and other pulmonary problems. Even after 15 days of treatment, 15 (8%) of the patients in our research had residual or recurrent illness. Honey is a popular household substance that has been used for a variety of purposes for centuries.<sup>10</sup> It consists of 181 components<sup>11</sup>, with fructose, glucose, fructooligosaccharides, amino acids, vitamins, minerals, enzymes, and water making up the majority.<sup>12</sup> Invertase, amylase, and glucose oxidase are the three primary enzymes found in honey.<sup>13</sup> Hydrogen peroxide produced by glucose oxidase has antibacterial properties. Honey has been used as an antiseptic in Indian, Egyptian, and Greek literature throughout history.<sup>14</sup> Recognition antimicrobial activity of honey was done by Van Ketel, in 1892.<sup>15</sup> According to Al-Waili and Boni study show that anti-inflammatory effect of honey ingestion is present.<sup>16</sup> Honey is said to diminish the movement of cyclooxygenase-1 and cyclo oxygenase-2, in this way showing mitigating effect.<sup>17, 18</sup> Honey decreases prostaglandin E2 and alpha 2 in blood prompting torment relief.<sup>19</sup> In our review, we discovered better help and more prominent patient fulfillment in concentrate on bunch utilizing honey. The symptoms of honey are uncommon. It can cause stinging torment due to acidic pH.<sup>20</sup> No long-lasting protection from honey has been noted.<sup>21</sup> In our study, no results of side effects of honey were observed.

## CONCLUSION

Honey is an effectively accessible family item which has mitigating, against infective and cancer prevention agent properties in the therapy of sore throat. Honey prompts quicker recuperation of signs and manifestations of sore throat. Thus, we can infer that admission of honey adjuvant treatment would help patients with sore throat.

### Author's Contribution:

Concept & Design of Study: Zia us Salam Qazi  
 Drafting: M Irfan ul Akbar  
 Yousufzai  
 Data Analysis: M Irfan ul Akbar  
 Yousufzai  
 Revisiting Critically: Zia us Salam Qazi, M  
 Irfan ul Akbar Yousufzai  
 Final Approval of version: Zia us Salam Qazi

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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