

# **SALIVARY ANALYSIS AND ORAL SYMPTOMS IN CONTROLLED ASTHMATIC PATIENTS**

**A THESIS  
SUBMITTED TO THE  
COLLEGE OF DENTISTRY, UNIVERSITY OF BAGHDAD IN  
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
DEGREE OF MASTER OF SCIENCE  
IN ORAL MEDICINE**

**By  
Widad F. Jaber**

**B.D.S.**

**2004**

# **ABSTRACT**

Asthma is a common inflammatory condition of lung airways whose cause is incompletely understood. Patients with bronchial asthma are affected both by the disease and its treatment. It is therefore difficult to dissociate the effects of the two, but there are indications that the drug treatment exerts the stronger effect. The purpose of our study was to examine the salivary composition in asthmatic patients and study the association between asthma and the occurrence of selected oral symptoms.

This study was divided into 2 phases. In the first phase (salivary analysis) the salivary composition and unstimulated salivary flow rates of 50 asthmatics were compared with that of 25 non-asthmatic subjects.

In the second phase (questionnaire survey) the occurrence of 9 symptoms of oral diseases in asthmatics (n=113) was compared with that of non-asthmatic subjects (n=111). In addition to the symptoms of oral diseases, data on background information (age, gender, smoking history and use of medications), were collected and their role as potential confounding factors was studied.

In the salivary analysis no statistically significant differences between the asthmatics and non asthmatics was found concerning salivary flow rates and saliva composition except potassium and inorganic phosphorus levels. Asthmatics had lower potassium content and higher inorganic phosphorus level in their saliva.

In the questionnaire survey the asthmatic subjects reported more symptoms of oral diseases than non-asthmatic subjects. In six symptoms out of nine (dry mouth, sore mouth, halitosis, pain in- temporomandibular

joint (TMJ), stiffness in TMJ) and clicking in TMJ, asthmatics had significantly higher probability of having the symptoms compared to control group. The underlying cause of TMJ disorders and gingival bleeding was the coexisting allergy. On the other hand the symptoms of oral dryness could be attributed to the medication used in the treatment of asthma. The later may also indicate the effect of disease severity rather than the effect of medication itself. In general, subjects having all three risk factors (asthma, allergy and antiasthma medication) simultaneously, tended to have highest probabilities for symptoms of oral diseases.

Except for the concomitant use of medication other than for asthma, the potential confounding factors studied had only minor or modest effects on the probability of having symptoms of oral diseases. The use of medications was associated with significantly higher probability of having symptoms of several oral diseases when compared to non-users.

The clinical implications of these findings are that the asthmatic patients having allergy and regular antiasthmatic treatment with inhaled medications also need special attention concerning their oral health care.