**Title** : Association between periodontitis and periodontal indices in newly diagnosed bronchial asthma

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 Abstract:

**Background:**

Periodontitis is an inflammatory disease of the tooth-supporting structures. Current data suggest that periodontal disease may be a risk factor for asthma. The present study aimed to assess the prevalence of periodontitis and its relationship with the severity of asthma in asthmatic patients.

**Methods:**

This study was conducted on 70 newly diagnosed asthmatic patients as the case group and 70 healthy subjects as the control group, aged 20‒50. The asthma was diagnosed by a pulmonologist according to the last Global Initiative for Asthma (GINA) guideline. All the participants underwent peri­odontal examinations, which included measuring the pocket depth (PD), attachment loss (AL), gingi­val index (GI), and plaque index (PI) in one tooth from each sextant, including the incisor/canine and left and right premolar/molar regions for both the maxillary and mandibular dental arches.

**Results:**

Periodontal disease was significantly more prevalent in newly diagnosed asthma patients. Patients with asthma had significantly higher PI, GI, PD, and AL scores (P<0.001). Furthermore, dry mouth in asthmatic patients with cough and mucosal changes in asthmatic patients with wheeze were significantly more common than in non-asthmatic patients (P<0.05). The median AL in wheezing patients and the median AL and PD in participants who had asthma attacks within the previous month were significantly higher than in other patients. Furthermore, there was a significant negative correlation between AL with Forced expiratory volume in one second (FEV1) and forced vital capacity (FVC) and PD with FEV1 and FVC.

**Conclusion:**

Our results showed that periodontal diseases were more prevalent in newly diagnosed asthmatic patients, and asthma was more severe in periodontitis patients.