

## ADJUVANT TREATMENT WITH LOW-LEVEL LASER THERAPY IMPROVES BRONCHIAL ASTHMA IN YOUNG PATIENT: CASE REPORT

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**Background:** Bronchial Asthma is a chronic disease characterized by recurrent attacks of breathlessness and wheezing, due to narrowing of the airways and reduced airflow into and out of the lungs. According to World Health Organization estimates 235 million people suffer from asthma. Asthma is not just a public health problem for high income countries, it occurs in all countries regardless of level of development. Over 80% of asthma deaths occur in low and lower-middle income countries. Asthma is under-diagnosed and under-treated, creating a substantial burden to individuals and families and possibly restricting individuals' activities for a lifetime. Recent studies show that low-level laser therapy (LLLT) has an important anti-inflammatory action in acute lung inflammation, showing that it may controls bronchial hyperresponsiveness in rats. The aim was to evaluate LLLT response in a patient with bronchial asthma.

**Study:** This is a cross-sectional case report of young patient, 27-year-old, diagnosed with bronchial asthma for at least 3 years, using medicines. Diode Laser (MMOptics, Brazil) of wavelength 660 nm, power 35 mw, fluency 26.3 J/cm<sup>2</sup> and beam spot size 0.03 cm<sup>2</sup> with continuous mode was used. Thirteen points around the mouth and nose were irradiated for 30 seconds each point. The total treatment was 10 sessions, once a week. The number of total and differential cells in the induced sputum and blood, as well as lung function and peak expiratory flow were evaluated before and after laser treatment.

**Results:** There was a reduction in the eosinophils migration to the lung and increase of spirometry parameters, demonstrating by peak expiratory flow and forced expiratory volume at timed intervals of 0.5, 1.0 (FEV<sub>1</sub>).

**Conclusion:** There was an expressive improvement in the clinical signs and symptoms of bronchial asthma in this patient post LLLT as evidenced by lung function and blood count.