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## **Correlation between signs of temporomandibular (TMD) and cervical spine (CSD) disorders in asthmatic children.**

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Neck accessory respiratory muscles and mouth breathing suggest a direct relationship among asthma, Temporomandibular (TMD) and Cervical Spine (CSD) Disorders. This study was performed to evaluate and correlate TMD, CSD in asthmatic and non-asthmatic. Thirty asthmatic children (7.1 +/- 2.6 years old), 30 non-asthmatic predominantly mouth breathing children (Mouth Breathing Group - MBG) (8.80 +/- 1.61 years) and 30 non-asthmatic predominantly nasal breathing children (Nasal breathing Group - NBG) (9.00 +/- 1.64 years) participated in this study and they were submitted to clinical index to evaluate stomatognathic and cervical systems. Spearman correlation test and Chi-square were used. The level of significance was set at  $p < 0.05$ . Significant frequency of palpatory tenderness of temporomandibular joint (TMJ), TMJ sounds, pain during cervical extension and rotation, palpatory tenderness of sternocleidomastoids and paravertebrae muscles and a severe reduction in cervical range of motion were observed in AG. Both AG and MBG groups demonstrated palpatory tenderness of posterior TMJ, medial and lateral pterygoid, and trapezius muscles when compared to NBG. Results showed a positive correlation between the severity of TMD and CSD signs in asthmatic children ( $r = 0.48$ ). No child was considered normal to CSD and cervical mobility. The possible shortening of neck accessory muscles of respiration and mouth breathing could explain the relationship observed between TMD, CSD signs in asthmatic children and emphasize the importance of the assessment of temporomandibular and cervical spine regions in asthmatic children.

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