ISB 2013
BRAZIL
XXIV CONGRESS OF THE INTERNATIONAL SOCIETY OF BIOMECHANICS
XV BRAZILIAN CONGRESS OF BIOMECHANICS

PLANTAR SUPPORT INFLUENCE IN POSTUROLOGY AND TEMPOROMANDIBULAR JOINT

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SUMMARY

Nowadays there is no current consensus about the correlation between the posturology and temporomandibular joint (TMJ). In this study the relationship between the plantar support modification and its influence on both the posture and higher levels, such as the TMJ, was assessed. In the present work, by modifying the plantar support of six children in growth age, their posture and normal skeletal growth trend was modified according to McNamara and Ricketts cephalometry scales. The study was conducted by using copyrighted Ergodinámica plantar orthotics. The results were compared with a control group which did not use any kind of orthotics, by using the same cephalometry and posturologic rating scales..

INTRODUCTION

There is an ongoing debate nowadays about the relationship between posturology and temporomandibular joint (TMJ). To date, no study has been published in relation to this issue. This study advocates the close relationship between plantar support modification and postural and cephalometry changes, since skeletal growth values, different from the standards derived from cephalometry assessment scale values, were obtained after plantar orthotics use in our case studies.

METHODS

Six children between 8 and 11 years old with bite class II and III according to Andrews were studied. Ricketts and McNamara cephalometry was made on their first visit and after a year of plantar change with orthotics but without orthodontic action in order to compare the evolution with a control group with plantar orthotic mold type.

Posturology degrees were monitored with inclinometer BASELINE Bubble in order to assess the kyphotic and lordotic indexes. Anterior and posterior axes were evaluated by drawing an imaginary perpendicular line from the external auditory canal to the ground.

Gait and walk study was made with Emed pressure plate Novel GMBH Emed system taking Newton/cm2 as measurement unit, and considering a value bigger than 15 Nw/cm2 abnormal.

Plantar support was modified by copyrighted orthotics Ergodinámica and significant variation, tending to normal, of the indexes and axes was obtained..

RESULTS AND DISCUSSION

After one year of follow-up plantar support became balanced with less than 10 Nw/cm2 by the use of plantar orthotics. The data obtained after one year of use tended to normal in strong contrast with the initial measuring values of kyphotic and lordotic indexes and ahead or forehead axes. Cephalometry result data showed a tendency towards class I bite parameters in all cases previously presenting class II and class III. Such evolution towards standards contradicts any expected result without orthodontic action.

CONCLUSIONS

The obtained results show that plantar support alterations have a strong influence on the musculoskeletal biomechanics (Posturology), even at higher levels, as is the case of the temporomandibular joint (TMJ). Plantar support and postural correction significantly changes the mandibular position in the three space planes. An important variation in growth standards is evidenced by making possible a progressive approach of cephalometry values towards growth standard values with the use of Ergodinámica orthotics and with the postural change occurred.