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Lip adaptation to simulated dental arch expansion. Part 2: One week of simulated expansion

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ABSTRACT

An increase in resting lip pressure and the resulting disruption of the intraoral pressure equilibrium may be responsible for the poor stability found with orthodontically expanded dentitions. Passive expansion strategies seek improved stability by altering lip pressure, thus creating a new equilibrium. One of these strategies has been shown to alter pressure favorably. However, pressure changes associated with conventional expansion need to be studied before conclusions regarding the superiority of passive expansion can be drawn. The purpose of this study was to examine lip pressure changes after 1 week of simulated conventional expansion. Twenty-two subjects agreed to wear a mandibular expansion-simulating stent full-time for 1 week. Resting pressure was measured in the midline and right canine areas. Midline lip pressure decreased significantly after 1 week while pressure in the canine area did not change significantly. This finding suggests an adaptive response that varies according to anatomic location.

KEY WORDS: Lip pressure, Adaptation, Dental arch expansion.

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