Influence of mucosal mechanoreceptors on elevator muscle activity in healthy subjects

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An analysis of saliva swallowing and tonic electromyographic activity was undertaken in 15 healthy subjects with complete natural dentitions with and without a palatal base inserted. Recordings were performed by placing surface electrodes on the left anterior temporal and masseter muscles. In eight subjects tonic electromyographic patterns of activity differed for the two muscles, depending upon the presence of the palatal base, whereas during swallowing of saliva only four subjects showed different patterns. In tonic activity of elevator muscles, there is probably a differential peripheral and/or central modulation of motoneuron pools of both elevator muscles. The lower different pattern in electromyographic activity of the two muscles during saliva swallowing in the intercuspal position suggests that periodontal mechanoreceptor stimulation might have such a powerful influence on electromyographic activity of both muscles that any difference originating in other inputs could have been