Air Pressure and Contact Quotient Measures During Different Semioccluded Postures in Subjects With Different Voice Conditions

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Objective The purpose of this study was to investigate the effect of phonation into tubes in air and tubes submerged in water on air pressure variables and vocal fold adduction in subjects with different voice conditions. Methods Forty-five participants representing four vocal conditions were included: (1) subjects diagnosed with normal voice and without voice training, (2) subjects with normal voice with voice training, (3) subjects with muscle tension dysphonia, and (4) subjects with unilateral vocal fold paralysis. Participants phonated into different kinds of tubes (drinking straw, 5 mm in inner diameter; stirring straw, 2.7 mm in inner diameter; silicon tube, 10 mm in inner diameter) with the free end in air and in water. Aerodynamic, acoustic, and electroglottographic signals were captured simultaneously. Mean values of the following variables were considered: glottal contact quotient (CQ) measured by electroglottograph, fundamental frequency, subglotti