Abstract for Vocal Loading and Recovery

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Background

There is yet no consensus in vocal health regarding two important vocal health factors: vocal rest and vocal recovery after high vocal load and after vocal surgery. Vocal Loading and Recovery presents a clinical approach to tracking processes involved in vocal loading and to tracking recovery from induced vocal fatigue and from vocal fold surgery of benign lesions.

Method/rationale

All subjects take part in a controlled, clinical vocal loading test (VLT) midway through voice accumulation. The vocal loading procedure was designed and evaluated in the first study. Any vocal loading effects are monitored from onset to regression throughout the studies, by use of a neck worn voice accumulator and a project specific voice activity questionnaire. In addition high speed footage of the vocal folds and acoustic recordings are carried out pre and post vocal loading. The VLT will be used in groups of subjects exhibiting differing voice pathology and occupational voice loads.

Preliminary results

Voice healthy participants experienced vocal fatigue induced by the VLT. The loading effects were confirmed through voice accumulation (significantly higher pitch, sound pressure level (SPL) and phonation time during vocal loading), voice activity questionnaires (higher reported voice problems, regressing within 24 hours) and acoustic recordings (significantly higher speech SPL following the VLT).

Significance

This project is based on the need of more basic knowledge in clinical voice health. The project will contribute with information on how healthy and pathological human voices react to vocal loading, which is important in functional voice diagnostics and treatment. Furthermore it will help determine how the voice recovers after vocal surgery, depending on whether a patient has used their voice in the recovery process or not.

Published paper