The current perception threshold objectively evaluates pharyngeal sensory function

Xuelai LIU[1], Xueyan Li[2], and Wen XU[1]

[1]Beijing Tongren Hospital Department of Otorhinolaryngology and Head and Neck Surgery
[2]Capital Medical University

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Abstract

Objective: To evaluate pharyngeal sensory function by Current Perception Threshold (CPT) measurement from healthy and paresthetic pharynx. Methods: In total, 122 healthy volunteers and 70 patients with pharyngeal paresthetic symptoms underwent CPT evaluation. Pharyngeal paresthesia (n=70) were classified into three categories based on aetiologies: six cases with pain in pharynx; 38 neuropathic patients with glossopharyngeal nerve and/or vagus nerve injury; and 26 patients with globus pharyngeus. CPT measurements were obtained from bilateral palatoglossal arch and tongue base at 2000Hz, 250Hz and 5Hz stimulation frequencies. Results: Ranked from high to low, the CPT values for the bilateral palatoglossal arches and tongue bases were: neuropathic patients, globus pharyngeus and normal patients. The CPT values for neuropathic patients on the injured side were significantly higher than those on the healthy side ($P<0.05$). The CPT values for patients with pain in pharynx were significantly lower than those of normal subjects ($P<0.05$) when the bilateral tongue bases were stimulated. Conclusion: The CPT testing is a reliable method for objectively and quantitatively assessing pharyngeal sensory function and able to differentiate pharyngeal paresthesia between neuropathic and subjective discomfort. Pharyngeal sensory function is more sensitive in patients with pain in pharynx. Pharyngeal sensory function is significantly reduced in neuropathic patients, especially on the injured side. Patients with globus pharyngeus have pharyngeal hyposensitivity.

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