Age-related Changes in Mastication and Swallowing

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Summary
Oral ingestion is very important for the elderly because eating is related to quality of life. In this review, Presbyphagia and Dysphagia of the elderly is described. Presbyphagia means the disruption of mastication and swallowing due to aging only, and Dysphagia means impaired masticatory and swallowing function due to diseases, aging, malnutrition, and medications. The following are age-related oral and pharyngeal changes in mastication and swallowing.

Oral and pharyngeal sensibility, oral stereognostic abilities, and salivation at resting, is reduced. The number of teeth is decreased, therefore masticatory efficiency is also reduced, but self-assessed masticatory function is not reduced by aging. The elderly compensate his/her reduced masticatory performance by increased mastication times and a large particle size in swallowing threshold. There is a disconnect between evaluation by masticatory efficiency and evaluation of eating function, therefore a new method is needed to evaluate masticatory and swallowing function comprehensively.

The relationship between prosthetic treatment and nutrition is still unknown.
Oral transit time of the food bolus by the tongue is increased. Triggering of the swallowing reflex is delayed. Volume of pharynx and elevation of the hyoid and larynx is increased. Opening of the upper esophageal sphincter, and pharyngeal pressure is reduced. Pharyngeal residue, penetration, and multiple swallowing is increased. Coordination of swallowing and respiration is changed, and swallowing apnea duration is increased. Aging decreased the reserve of mastication and swallowing, and age-related changes are occurring.