

Objective Evaluating Methods for Masticatory Function in Complete Denture Wearers



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Objective evaluation methods of masticatory function have been investigated in denture wearers by measuring the masticatory performance and efficiency, by the use of electromyograph recordings, mandibular movement recordings, and masticatory force analysis and so on. Because, it is necessary to evaluate masticatory function for the success of dental restorative procedures and to diagnose patients with denture, maxillofacial prosthesis and temporomandibular joint disorder.

The masticatory function is affected by the stomatognathic system, that is, teeth, muscle, temporomandibular joint and central nervous system. In the patients with denture, form of residual ridge, volume of saliva, artificial tooth form, denture fitness and stability, denture experience, and some mental factors would be added to the evaluation. As a consequence, objective and comprehensive evaluation on patients is necessary to predict successful denture wearing.

In the lecture, the sieving method and the food intake questionnaire method for denture wearers developed by our department will be presented.

In our sieving method, masticatory performance (MP) is calculated by following expression. $MP=100-5C$, (C: the volume of peanuts remaining on the 5 mesh sieve). It is unnecessary centrifuging, not to mention transferring particles to centrifuging tube and collecting small particles on 20 or 40 mesh sieves.

In our food intake questionnaire method, the food list is considered food texture (hardness, viscosity, elasticity, and adhesiveness), cooking methods, and likes and dislikes. The "mastication score" representing chewing ability of patient is indicated by the expression with "the food-intake difficulty rate" calculated by "the standard food-intake rate", and the individual points answered each grade of food group. The paper published in Journal of Oral Rehabilitation in 1998 will be presented to explain that this method is no way subjective.