

ic of anterior denture part that can be occluded by guiding plane of pier abutment of conventional RPD is another advantage.

01-7

### The Subjective and Objective Evaluation of Complete Dentures.

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In daily clinical activities, it is common that the treatment success of complete dentures is assessed mostly based on the patient's subjective satisfaction. However, the objective evaluation data that is not influenced by the subjective bias could be useful for the assessment of complete dentures. We developed the simplified technique for the measurement of the masticatory performance by using the particle size distribution of masticated hydrocolloid impression material, and this method could be one of such objective measures. Seventeen edentulous patients who attended the Student Clinic at Kyushu University Dental Hospital participated in the study. For the subjective data, the patient's 'satisfaction scores' (32 items) was recorded by visual analog scale, and the 'masticatory score' was obtained from the questionnaire where the number of kinds of foods that the patient could eat was recorded. Each data was obtained from the patients at the first visit with the old dentures, and after the completion of appropriate adjustment procedures following the delivery of new dentures. The improvement by new dentures was calculated, then the correlation between the objective data and the subjective data was investigated. Statistical analysis revealed that there were significant correlations between the masticatory performance and 'masticatory score' ( $r=0.83$ ,  $p<0.001$ ), and the masticatory performance and 10 items of 'satisfaction scores' ( $r=0.522-0.769$ ,  $p<0.05$ ), respectively. Hence we concluded that the objective evaluation by the masticatory performance might be useful in evaluation of the improvement of complete dentures.

Oral

01-8

### Complete Denture by Biometric Impression Tray

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Impression trays can be regarded as a means of only carrying impression material into mouth and ensuring that the material is distributed to an even thickness over the denture-bearing surface so that the dimensional changes associated with the setting of the material produce the minimum distortion of the impression. With this limited concept, a vital part of the denture space cannot be recorded.

To define the positions of the lips and cheeks, one of the most satisfactory method is to use measurements of the average pre-extraction buccolingual breadth of the alveolar process and to construct what we call 'Biometric' trays. These restore the pre-extraction contour of cheeks and lips so that the correct shape of the sulcus can then be recorded with a impression material.

A clinical application will be presented by this thesis to construct the complete denture holding the lips and cheeks in their pre-extraction positions and restoring the facial contour.