

Fabrication of Mandibular Complete Denture using Functional Impression Technique in Patient with Severe Residual Alveolar Bone Resorption

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As alveolar bone resorption continues in the edentulous ridges, usage of complete denture causes discomfort and difficulty in mastication due to the loss of stability, retention and support of denture. Especially, problems induced by progressive bone resorption are manifested by fabrication and usage of mandibular complete denture.

Making Impression for edentulous ridge is one of the most important processes in the procedure in complete denture fabrication. Not only this process is related directly to the stability, retention and support for complete denture, but also to the support for lips and adjacent structures.

Two basic approaches for the making mandibular edentulous impression are static and functional method. Static impression is conventionally categorized into three groups according to the amount of pressure on tissues; Non-pressure impression, pressure impression, selective pressure impression. On the other hand, functional impression technique which uses the functional movement of the patients with tissue conditioner that first described by Chase in 1961 is procedure for taking dynamic impression of supporting tissue and length of denture border.

Usually, mandibular complete denture has been fabricated by selective pressure impression technique for the additional support on the buccal shelf as a primary stress bearing area. However in case of patient with significant alveolar bone resorption, it is difficult to place tray in a proper position. Even though appropriate impression has been made, 'sand paper effect' due to loss of denture stabilization, induces soreness of the mucosa and discomfort in wearing complete denture.

There are several methods to make impression tray for functional impression such as technique using old denture, or individual tray. In this case, we used wax denture fabricated by selective pressure impression technique according to conventional way. Wax denture was relined by tissue conditioner and functioned intraorally. And then we have taken impression surface and external polished surface generated functionally.

By using this functional impression technique, we have gained satisfactory result, so that I wish to present this case report.