

VERTICAL DIMENSION IN ADULT REHABILITATION

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Aim: in adult rehabilitation, orthodontic and prosthesis or surgical-orthodontic therapies, practitioner must obtain a three-dimensional equilibrium between structural bone, muscle and occlusion. To allow this therapeutic goal is essential a good analysis of vertical dimension.

Materials and methods: we show two frequent cases: first, a partially edentulous patient in which the loss of posterior vertical dimension had caused anterior displacement of mandible and anterior cross bite; second, who concern a skeletal class III open bite who need surgery intervention.

Results: in the first case we have to restore origin dimension to permit good rehabilitation. So we used an interocclusal bite (4mm) to eliminate incorrect occlusal contacts and to relax masticatory muscle. Then we have determined physiological mandible rest position with electrokinesio-myographic tests. So on the basis of normal criteria of working muscle (isotonic and isometric contraction) we can determine right vertical dimension. In the second we have to find a new equilibrium between the components of maxillary complex with care to preserve vertical dimension and free way space. For this reason we must associate to mandible set back even a maxillary Le Fort I to lift up the upper jaw. Often this dimension have to be modified to solve malocclusion and we can do it, more or less, it depends by facial typologies. In a short face there is a great amount of FWS that can be peacefully used while in a long face the space available is too short and we must do extremely care to not violate it and to preserve it, so maxillary Le Fort I is further on justified.

Conclusions: vertical dimension is extremely important in rehabilitation of an adult patient. So we must efficiently estimate it to restore or to preserve. The physiological muscular work really indicates vertical dimension if occlusal anomalies are previously eliminated. In those patients who need surgical intervention we must consider to restore vertical dimension with structural bone modification.