Shortened dental arch therapy in Oligodontia patient with maxillary hypoplasia : View of Consultants in restorative dentistry

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The minimum number of teeth needed to satisfy functional demands has been subject of several studies. However, since functional demands can vary from individual, this number cannot be defined exactly. It has been demonstrated that shortened dental arch es comprising the front teeth and the premolars, can meet the requirements of a functional dentition. The shortened dental arch concept may be considered a strategy to reduce the need for complex restorative treatment in the posterior regions of the mouth.

It implies that the prompt replacement of absent molars by a removable partial denture leads to overtreatment and discomfort.

The shortened dental arch concept is based on circumstantial evidence, and not contradict current theories of occlusion and fits well in a problem solving approach.

An 18-year old female with oligodontia and prognathism, presenting with the chief complaint of unesthetic appearnce and masticatory difficulty due to oligodontia and inadequate occlusion contact.

None of the patient has oligodontia and atypical orofacial appearance. Panoramic radiograghs confirmed congenitally missingpermanent teeth and remained deciduous mandibular incisors and right cuspid. Cephalogram presented mandibular pronathism and thefacial profile is concave, maxillary and mandible edentulous alveolar bone are atrophied. The posterior teeth showed inadequate level of occlusion where as the anterior teeth exhibited cross-bite pattern

This clinical report describes fixed partial dentures fabricated for the maxilla and mandible, which resulted in a great improvement of the esthetics and the function of the masticatory system. Signs of facial concavity were greatly reduced.

Masticatory ability is closely related to the number of teeth, the shortened dental arch (SDA) may be defined as having an intact anterior region but a reduced number of occluding pairs of posterior teeth.

Masticatory efficiency and masticatory ability are important component of oral functionality, but patient adaptation to changes in dental arch length with progressive loss of teeth is critical to successful treatment. If the premolar regions are intact and there is at least 1 pair of occluding molars, SDA does not impair masticatory efficiency.

Impaired masticatory ability and associated changes or shifts in food selection are manifested only when there are less than 10 pairs of occluding teeth.

Prosthodontic considerations in patient treatment include occlusal stability, establishing the correct vertical dimension, and preserving the health of the soft and hard tissues as well as that of the temporomandibular joint.