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AUXILIARIES IN LINGUAL ORTHODONTIC: force arms Part One

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Original Article
Published on 05/04/98

AIMS: *the evaluation of simple specific structures, used to optimize lingual orthodontic treatment.*

MATERIALS: *use of auxiliaries and segmentation of the arch.*

Orthodontic treatment consists of a sequence of specific phases in order to reach the resolution of a given case progressively. This sequence is often standardized, especially when using the "straight wire" technique, with each phase being preparatory to the subsequent one.

The study and evaluation of the dental movements in a complex case leads to the conclusion that certain movements cannot be easily performed simultaneously with a continuous arch without being a disadvantage to the control of the force system.

If the treatment is programmed not as a sequence of phases but as a series of different single movements, we can consider applying several force system in a single phase. Thus, we can reach the definition of auxiliary, that is a means to obtain a single specific effect within a more complex therapeutic programme. The auxiliary is, therefore, a structure which is integrated with the baseline appliance, that can be removed after reaching its specific goal.



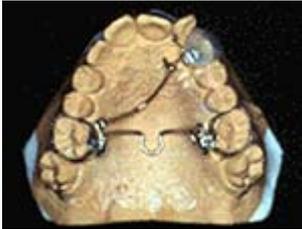
The simplest form of auxiliary is anchorage. As we can see from the above pictures, the structure anchors the posterior segment (specific), it is well integrated with the lingual appliance and it can be removed when the goal is achieved, so that the treatment can be finished with the straight-arch technique.





The same concept can be applied to a system which moves a single tooth, so that the rest of the arch can be worked on at the same time.

In theory a segmentation of the arch has been performed, in the sense that the movements of two different segments have been considered: the canine, with its anchorage, and the remaining part of the arch. In theory, since in actual fact a real segmented arch technique has not been used, but an independent mechanical system has been added to the baseline lingual appliance.



The construction is simple, thus permitting a good control of side effects.

The laboratory phase is very important and thanks to a cooperation between dentist and technician an auxiliary can be realized which, besides creating good mechanical control, must cause the least possible discomfort to the patient.

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Virtual Journal of Orthodontics
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