

The significance of aligner orthodontics in interdisciplinary medicine and dentistry



Werner Schupp

Orthodontics has always had an interdisciplinary impact in dentistry and medicine. The collaboration with otorhinolaryngologists specialised for children with oral respiration or speech-orthopedagogues and speech therapists for patients with speech disorders and tongue malfunction, is integrated in our practical work, as the correlating symptoms mentioned above are scientifically proven. For early orthodontic treatment, dentists and especially paediatricians play a decisive role by means of informing parents about the need of an orthodontic examination.

For Class III, Class II/1 patients with severe horizontal flap, lateral reverse articulation or Class II/2 with a hereby resulting inhibition of growth, an early orthodontic intervention becomes necessary. It is supposed to be as short as possible, but above all minimally invasive. Nowadays it is possible to perform a combined treatment with functional orthodontic devices and aligners. Therefore, Blanck-Lubarsch has published an article in this issue, which will be continued in the next issue.

With the increase of orthodontic treatment for adult patients, the interdisciplinary aspect is becoming increasingly important. While preprosthetic orthodontic treatment, such as uprighting of tilted molars, has always been part of the orthodontic practice, pre-implant surgical orthodontic treatment has been gaining importance over the years. This includes gap-opening and gap-distribution, but

in particular the generation of new bone through orthodontic root movement.

Orthodontics is indispensable in many cases of aesthetic dentistry. A wide range of dental treatments is only possible in combination with orthodontic pretreatment. A less invasive treatment is granted as tooth preparation can be carried out in a more substance conserving way. In red-white aesthetics, orthodontic treatment offers the advantage of forming the gingiva line or changing the biological width before dental therapy. That way it can be spared during preparation.

Due to the direct connection of the craniomandibular and musculoskeletal system, an interdisciplinary approach between orthodontics and dentistry, but especially with medicine in general, is absolutely necessary. Functional diagnosis and functional therapy should be considered from a medical point of view. For many patients, the integration of the manual therapist is essential.

After the pretreatment of the dysfunctional patient via occlusal splint and accompanying manual-medical and manual-therapeutic treatment, possibly combined with further medical and psychological care, therapy is typically continued by means of orthodontic treatment and, if indicated, followed by a restorative dental therapy.

Next to the medical baseline examination and different imaging techniques, mounted plaster casts or nowadays



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scanned arches in centric relation are the basis for interdisciplinary communication. Our dental world is becoming more and more digital; however, we should not forget about our analogue origins as David Gerdolle aptly pointed out on the occasion of the 'International Digital Days' in Paris this year.

Aligner orthodontics has evolved to an almost complete digital workflow starting with a scan, continued by a virtual treatment and three-dimensional (3D) printing of set up models, the eventual step is the analogue thermoforming of aligners, as long as the direct printing has not been thoroughly researched and approved.

Both in-office and outsourced workflow in aligner orthodontics are possible methods nowadays and they both deliver exceptional results. The digital world enables us as

orthodontists to perform orthodontic treatment in a proactive and comprehensive approach.

Colleagues that neither prefer one nor the other way, should also be offered workarounds. However, there is one thing we should not desire, regardless of how comfortable it is: to give up control.

A handwritten signature in black ink that reads 'Werner Schupp'.

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