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THE DIGITAL THERAPEUTIC CHAIN - FROM THE PATIENT TO THE PRODUCTION

Purpose

The digital therapeutic chain in the dentistry is expanding more and more. Primary CAD/CAM systems were a replacement for conventional production methods in the dental laboratory as well as the use of digital data was applied to get more planning reliability. The field of applications is now escalating. Hereby the different digital processes are always linking and can't nearly be separated in the future. One technique will involve another - otherwise the complete process chain would be absurd.

Methods

The unique digital processes are analyzed separately. Therefore the different components are mentioned. First step is the optical three dimensional measuring with an overview of the existing scanners and the different measurement methods. Next steps are the influence of the design software and the possibilities of the manufacturing and its different qualities. The last step is an overview about the existing intraoral digitizers and their technology as well as the technological requirements of the digital model manufacturing.

Result

This lecture will show the different process steps of a digital process chain which starts with the data collection directly at the patient. Different approaches and the needed machines as well as their functionality will be described and the existing interfaces will be discussed. It will show a complete overview of a possible future process between dentist and laboratory / milling center.

Conclusion

The conclusion is a structured analysis of the digital process chain. It shows the possibilities but also its limitation to keep the survey of the different developments in the CAD/CAM technology.