Production of reproducible intraoral photographs

Introduction and aims

The use of intraoral photography is becoming a standard for today's modern dental practice. Aim of this study was the search for previous methods for the production of reproducible intraoral photographs under standardized conditions. We investigated also the question of new practical methods.

Material and methods

A literature search was undertaken. For the orientation into the subject professional textbooks have been used The search was performed using the medical database Medline. In addition, a full-text search was performed in the electronic database of the Saxon Regional Library in Dresden (SLUB). Usable studies and photographic material was also researched on the internet search engine Google. Own photographic material was inserted in the study.

Results

For the previously used method of "freehand" - photography under reproducible conditions in the dental chair, many studies have been researched. For new procedures could be determined only a few studies. Two new and technically complex methods have been described. In one case, the process allows the possibility of standardized and reproducible patient positioning (OrthaS®). In the second case, all degrees of freedom of patient positioning, the orientation of the camera, takes into account the reproducibility of the photographic conditions (STOP® - Appliance).

Conclusions

For use in daily practice is the "freehand" - photography with respect to reproducible and standardized conditions with a suitable DSLR camera plus suitable and appropriate accessories, first method of choice. A careful training in the technique is essential. Suitability of OrthaS ® - chair for photography under reproducible shooting conditions is not given the currently available modules. However, a benefit for the photography by the correct patient positioning is evident. The advantage of this chair for daily practice would be, that it is also suitable for gnathological bite issues and acquisitions for restorative procedures. The camera module has yet to too many degrees of freedom to allow an objectification of the recording conditions. For scientific purposes, an apparatus such as the STOP ® Appliance - device may be suitable. In combination with the measurement data on the image editing programs (Gingivomorphometrie), an exclusively subjective evaluation of the photographic data could be objectified. Further studies, especially for assessing the suitability of this procedure for the posterior region should follow. The development of an occlusal – mirror - module would be desirable so that also objectified surveys and the collection of a complete photo status are possible.

Key words

photography dental, classification, instrumentation, methods, standards, statistics and numerical data, utilisation reproducibility, reproducible, digital, intraoral