CBCT SPECIAL ISSUE: EDITORIAL

Editorial: CBCT special issue

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In the dental community, it is a common belief that CBCT was invented for oral and maxillofacial imaging. Of course, we know that this is a myth since the technique of a volumetric CT is indeed much older and dates back to the late 1970s.^{1,2} Considering that CT was introduced in 1973, its volumetric counterpart was developed very soon thereafter driven by the need for high spatial and temporal resolution that a conventional CT at that time was not able to achieve. However, successful marketing of the technique indeed was much later, and certainly a consequence of the publication of “A new volumetric CT machine for dental imaging based on the cone-beam technique: preliminary results” by Mozzo et al³ in 1998. Introducing the first commercially available system explicitly “devoted to dento-maxillo-facial imaging”,³ the authors opened a new worldwide market for three-dimensional radiography for dental and maxillofacial diagnosis and treatment planning. It still took some years, roughly between 2006 and 2007, before the real boom started making CBCT today an indispensable tool for modern state-of-the-art imaging in our subject. Alongside this boom, not all information published was scientifically sound and even some mythical “facts” have entered the stage. In 2015, that is, 17 years after the initial publication,³ *Dentomaxillofacial Radiology* now acknowledges the successful initial period of CBCT imaging in dental and maxillofacial radiology by publication of this special issue. It covers a broad spectrum of topics, from pure technical facts over radiation dose aspects to typical clinical tasks (impacted teeth, temporomandibular joint, endodontics, orthodontics) and, last but not least, also existing (inter) national guidelines on clinical use of CBCT. One aim of this special issue was to provide as scientifically sound as possible information on selected specific topics in CBCT imaging. The Editors were extremely happy that so many well-known experts in the field accepted our invitation and prepared

invited reviews. These were processed in the regular way, that is, by peer review and subsequent revision by the authors. Obviously, this special issue cannot cover all aspects of CBCT; this is simply not possible in one issue. Rather, it aims to provide an up-to-date overview of some important aspects that either are often being discussed controversially and/or that are of broad interest to the clinical community in the routine application of the technique. Nevertheless, one may ask why no “CBCT in dental implantology” review is included. Well, when the special issue content was planned and designed in 2013, it was quite apparent that CBCT was already a broadly established imaging technique in implantology. High-quality review articles dealing with the application of CBCT in dental implantology have recently been published elsewhere.^{4,5} Given the limited publication space available for a special issue, it was thus decided to include other maybe more controversially debated topics. As with all articles being published in the journal and also in other scientific journals, the reviews included express the view of the authors on the topic, which does not necessarily coincide with the point of view of the Editors. We believe, however, that the review process and subsequent revisions carried out by the authors nevertheless facilitates a balanced view on the different topics.

I hope that the issue can fulfil what it was intended for: providing up-to-date information on specific imaging topics evident in CBCT imaging at the time of publication. As time evolves, additional aspects may come up as controversies may disappear. As a leading international oral and maxillofacial imaging journal, *Dentomaxillofacial Radiology* will continue to follow the technique through the coming years. You as readers of the journal can easily do the same, as surely every future issue to be published will include CBCT-related topics. The period from 1998 to today may be termed as “CBCT introduction and clinical establishing period”. What follows now from a scientific point of view should be a period where CBCT should be mainly assessed regarding its patient-related outcome. By now, we know that CBCT images look nice, are accurate in dimensions and can be used for various clinical applications;

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however, what remains to be clarified is if, and how much, our patients indeed benefit from this “novel” imaging technique. I sincerely hope that, say in 10 years’ time, we are able to answer this important remaining question.

Sincerely

Ralf Schulze
Editor

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