



Endodontics against the background of demographic change

In developed countries, a serious change in the demographic structure is currently being observed. Extrapolations assume that, for example, in Germany there will be decreased population numbers for children/adolescents and adults, whereas the number of elderly people (≥ 80 years) will almost double until 2050. At the same time, these patients keep their teeth longer and longer. In view of treatment for caries, it can be assumed that the caseload in this age group will dramatically increase by approximately 20 to 30%. Contemporary, prosthetic treatment will initially increase slowly (until 2030: + 20% prevalence) and thereafter intensively increase with the current caseload almost doubling (1.8 to 2.0-fold). It is reasonable to assume that with regard to endodontic treatment the elderly caseload will increase accordingly within the next 30 years.

Consequently, dental treatments for the elderly will become significantly more important in the coming decades. But are training and education in endodontics prepared for these challenges? Nothing indicates this, indeed quite the contrary. In Germany, paediatric dentistry is an examination subject, whereas dental treatment of senior citizens is hardly mentioned during the course of studies. Age changes of the pulp-dentine complex (intrapulpal calcifications, age alterations of hard tissues, regressive changes of the pulp tissue), will unquestionably complicate endodontic treatment in these patients. But it is not primarily the technical issues that will play a part in the ongoing process.

As our patients grow older, there is a natural increase in the likelihood that patients will suffer from relevant systemic diseases such as diabetes mellitus, renal insufficiency or cardiovascular disease, and/or will be systemically medicated with a number of different drugs. At the same time, many of these

patients have to assume a reduced body immune system. Since endodontic diseases usually have a microbiological cause, this aspect is of great clinical relevance. Reduced success rates of root canal treatment – at least in the cases of infected root canal systems – are assumed.

All in all, general medical and immunological aspects in endodontics will become significantly more important over the coming decades. Does it therefore make sense in the long term to reduce endodontics in undergraduate and postgraduate courses mostly to technological aspects (new root canal instruments and motors, new obturation materials and techniques)? I think not. In particular, postgraduate programmes should take into account the illustrated developments. The future focus on “geriatric endodontics”, with its included comorbidities, age-related hard and soft tissue alterations, special management requirements, less patient mobility, etc¹, requires educational adaptation. Current dental health infrastructure in Germany suffers from shortcomings in sufficiently trained dental professionals, especially sufficiently trained endodontists, and inappropriate structures for the upcoming challenges associated with the switch towards geriatric dentistry. Obviously, similar infrastructural problems have been reported for other developed countries, such as the United States², Australia³, China⁴ and Brazil⁵.

Thus, the above-mentioned shift to “geriatric endodontics” will certainly be associated with higher medical effort per treatment and patient. Therefore, an increased inclusion of education for effective overall and specifically geriatric patient management is strongly recommended for the dental curriculum. Education in endodontics should shift from a more technical point of view to an interdisciplinary concept combining basic endodon-

tic aspects with relevant medical, immunological and pharmaceutical aspects.

Enjoy reading the current issue of ENDO – Endodontic Practice Today, and have a nice summer.



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■ References

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