

COMMENTARY TO HABILITATION THESIS¹

This thesis is a summary of published articles from two thematically different areas. The reason for this division is the unexpected disruption of normal routine activities caused by the global crisis triggered by the spread of COVID-19. In a situation where health systems were on the verge of collapse, and an epidemic of potentially severe disease was unfolding, allocating all available capacity to manage this crisis was necessary. This situation also disrupted the regular follow-up of chronically ill patients and the long-term monitoring of patients enrolled in trials. On the other hand, the crisis provided the opportunity and necessity to orientate oneself in a completely new situation and to gain knowledge in areas often neglected hitherto.

Medication-related osteonecrosis

The issue of medication-related osteonecrosis of the jaws has been a hot topic in maxillofacial surgery for the last 20 years. It is a complication, especially of antiresorptive medication indicated in treating osteoporosis, multiple myeloma, bone metastases of solid tumors, and other conditions associated with increased bone turnover. By the very nature of the disease, the necessary interdisciplinary approach to the prevention, diagnosis, and treatment of this disease naturally shapes the scope for a wide range of research, teaching, and outreach activities. Osteonecrosis of the jaw is a relatively rare complication, but given the significant number of patients treated with antiresorptive therapy, the absolute number of people at risk is not negligible. Medication-related osteonecrosis of the bony ear canal is a disease related etiologically and anatomically, although much rarer. Its co-occurrence with osteonecrosis of the jaw is possible, and the dentist or maxillofacial surgeon can contribute significantly to its early diagnosis. So far, only isolated cases of osteonecrosis of the ear canal have been published. One of the articles the author of this thesis contributed on describes an ear canal osteonecrosis in patient treated only with low dose bisphosphonate for osteoporosis. This article suggested disease name: Bisphosphonates-associated ear canal osteonecrosis (BPECO).

A COVID-19 disease among dentists

The worldwide spread of COVID-19, which was declared a pandemic by the WHO on March 11, 2020, has had a dramatic impact on everyday life and especially on the healthcare system, not excluding dentists. Despite the unfavorable development of the epidemic, the Czech Republic has managed to prevent a widespread reduction in dental care, thanks to many colleagues' personal commitment. Recommendations the Czech Chamber of Dentistry issued for its members also contributed to this. The author of this paper participated in the development of these recommendations as their editor and principal author. The development of these recommendations required obtaining the most up-to-date information available on the nature of the disease, the characteristics of the causative virus, and the possibilities of protection. Once the basic principles of the recommendations were formulated, it was necessary to verify their applicability and compatibility with current regulations and rules. During the epidemic, the appropriateness of the measures was continuously monitored, and the measures were updated as necessary. The author organized a cross-sectional questionnaire study among Czech dentists to verify the recommended measures' effectiveness and acceptance level. This study revealed lower COVID-19 incidence and fast vaccination among Czech dentists as the main results. The whole process can be likened to a clinical study conducted in real-time. The critical moments of the COVID-19 pandemic, the methodology of the validation study, and its published results are described in the second part of this paper.

¹ The commentary must correspond to standard expectations in the field and must include a brief characteristic of the investigated matter, objectives of the work, employed methodologies, obtained results and, in case of co-authored works, a passage characterising the applicant's contribution in terms of both quality and content.

- [1]** ZELINKA, J., J. BLAHAK, V. PERINA, R. PACASOVA, J. TREGLEROVA a O. BULIK. The use of platelet-rich fibrin in the surgical treatment of medication-related osteonecrosis of the jaw: 40 patients prospective study. *Biomedical Papers* [online]. 2021, 165(3), 322–327. ISSN 1213-8118. Dostupné z: doi: 10.5507/bp.2020.023. IF: 1,648

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
30	20	30	30

- [2]** UHŘÍKOVÁ, T., R. HODAN, G. PAVLÍKOVÁ, V. PEŘINA, Z. DANĚK a J. ŠTEMBÍREK. Léky indukovaná osteonekróza čelistí a registr bisfosfonátových osteonekróz čelistí v České republice. [Medication induced osteonecrosis of the jaw in cancer patients and register of the bisphosphonate related osteonecrosis of the jaw in the Czech Republic]. *LKS : časopis České stomatologické komory*. 2015, 25(7–8), 150–155. ISSN 1210-3381.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
10	10	30	30

- [3]** SALZMAN, R., J. HOZA, V. PEŘINA a I. STÁREK. Osteonecrosis of the external auditory canal associated with oral bisphosphonate therapy: Case report and literature review. *Otology and Neurotology* [online]. 2013, 34(2), 209–213. ISSN 1537-4505. Dostupné z: doi:10.1097/MAO.0b013e31827ca34d. IF: 1,953

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
20	0	40	0

- [4]** PEŘINA, V., P. POKORNÝ, M. MACHÁLKA a O. LIBERDA. Osteonekróza čelisti při léčbě bisfosfonáty. [Bisphosphonate-associated osteonecrosis of the jaw]. *LKS : časopis České stomatologické komory*. 2008, 18(5), 140–143. ISSN 1210-3381.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
90	40	80	50

- [5]** PEŘINA, V., R. ŠMUCLER, J. TREGLEROVÁ, N. PILBAUEROVÁ, M. KUNDEROVÁ a J. SCHMIDT. Postoje členů České stomatologické komory k opatřením zaváděným v zubních ordinacích v souvislosti s pandemií COVID-19. [Attitudes of Czech Dental Chamber members to the COVID-19 pandemic measures implemented in dental practices]. *Česká stomatologie a Praktické zubní lékařství* [online]. 2022, 122(2), 33–42. ISSN 1213-0613. Dostupné z: doi:10.51479/cspzl.2022.009

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
80	80	70	90

[6] SCHMIDT, J., V. PERINA, J. TREGLEROVA, N. PILBAUEROVA, J. SUCHANEK a R. SMUCLER. COVID-19 Vaccination among Czech Dentists. *Vaccines* [online]. 2022, 10(3), Article number 428. ISSN 2076-393X. Dostupné z: doi:10.3390/vaccines10030428. IF: 4,961

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
80	80	70	90

[7] SCHMIDT, J., V. PERINA, J. TREGLEROVA, N. PILBAUEROVA, J. SUCHANEK a R. SMUCLER. Covid-19 prevalence among czech dentists. *International Journal of Environmental Research and Public Health* [online]. 2021, 18(23), Article number 12488. ISSN 1661-7827. Dostupné z: doi:10.3390/ijerph182312488. IF: 4,614

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
80	80	70	90