Academy of Prosthodontics 2024 Annual Scientific Session
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Program Speaker – Marcus Engelschalk

Title

Artificial Intelligence in Dentistry: Potential Ethical Considerations

Abstract

The use of AI in medicine is increasingly affecting more specialist areas. A change from the pure application in diagnostics to therapy decisions and direct therapy can be seen. The implementation in daily practice is still very cautious for various reasons. In addition to technical hurdles, the reasons for this lie in unresolved legal and ethical issues. In addition, handling the resulting patient data, the definition and collection of data as basis for AI decision-making must also be discussed. This gives rise to fundamental ethical questions that affect both the compilation of data, its processing, and the resulting treatment strategies.

Dentistry can be seen differently from medicine. Accordingly, ethical principles must be developed and established. In addition, the same principles apply to medicine and dentistry in the creation, processing, and storage of data. Due to increasing use of AI in dentistry, dealing with possible ethical principles is becoming imperative.

Learning Objectives

1. To show the range of applications and potential of artificial intelligence within dentistry.
2. To recognize the basics of data provision for artificial intelligence and the associated problems of data origin, quantity and quality as well as the possible subjectivity of the software programmers.
3. To understand and be made aware of the ethical conflicts that arise from data selection and data analysis when using artificial intelligence.

Biography

MARCUS ENGELSCHALK

Marcus Engelschalk graduated from dental School of Würzburg, Germany with a post graduated training and education in implantology and oral surgery and obtained his PhD in General Surgery at the University of Pécs, Hungary. He is owner of SlowDigitalDentistry, a private dental office as well as attending physician for oral surgery and implantology at the isaAOP Hospital in Munich, Germany. In addition, he is adjunct external scientific researcher at the Dept. of Oral and Maxillofacial Surgery, University Medical Center Hamburg-Eppendorf, Germany with research focus in Augmented Reality and Artificial Intelligence in dental implantology. Marcus Engelschalk is board member of the Int. MINEC Board (Megagen International network of Education and Clinical Research), Ambassador of the Digital Dentistry Society DDS for Germany as well as Ambassador for SlowDentistry and Editor in Chief of the International Journal of Future Dentistry IJFD