

## GUEST EDITORIAL

### **Artificial Intelligence and the future of Prosthodontics.**

The medical robotic industry has lately been shifting focus to autonomous robotic technology; these are robots capable of performing a procedure themselves without the constant control or active monitoring by a natural person. Also, remote control injectable medical microrobots have been envisioned for the delivery of cytotoxicity agents to cancer cells.

In dentistry, robotics is still in its infancy, even though all the necessary technologies have already been developed and could easily be adapted for the ease of both doctor and the patient. In prosthodontics, the application of robots is limited mainly to the teeth arrangement complete dentures and in implantology. The opportunities that emerge from a combination of robotics, artificial intelligence, machine learning and dentistry referred to as Dentronics.

The idea of a dental training robot was first described in 1969. The application of humanoid in dental education was tested in 2017, it is a full-body patient simulation system. Another, robotic educational equipment described in the literature is the ROBOTUOR developed as an alternative to a clinician to demonstrate tooth cleaning techniques to patients. Moreover, in oral & maxillofacial prosthesis AI has become an attractive possibility, especially in the treatment of oropharyngeal carcinoma. In 2009, the US-FDA approved the da Vinci system for transoral treatment of selected malignant lesions of the oropharynx, even when located at the base of the larynx and the tongue.

The use of robots in dentistry is said to increase precision, repeatability and reliability throughout the literature; yet, the volume of robotic dentistry research is constrained by the absence of readily available systems. Additionally, there is a lack of proficiency to program and regulate robotic systems. Therefore, research in this area depends on effective collaboration between dentists and engineers. Moreover, dental educational robotics in university setup appears to be potential propagator to introduce robotic dentistry and removing the hindrance of acceptance of robotic system among future dentists.

The application of AI in healthcare held promise for the future since it would decentralize the treatment process. AI lets medical workers deliver remote care more effectively. Future illness diagnosis will be more accurate thanks to artificial intelligence, which will be able to forecast outcomes and combine them with human diagnosis to increase the likelihood of accurate identification.

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