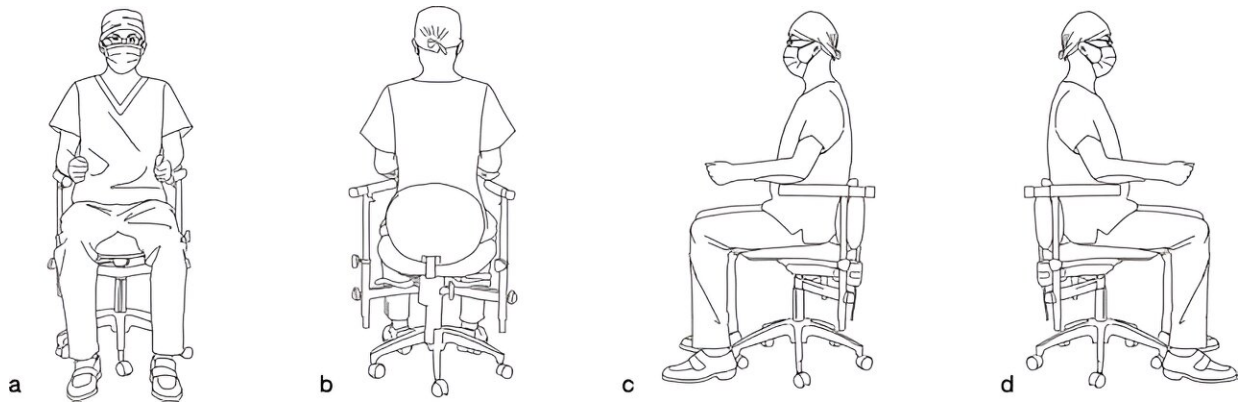


Revolutionizing dentistry: The dental operative microscope

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a View from the dentist's front. b View from the dentist's back. c View from the dentist's left side. d View from the dentist's right side. Credit: *International Journal of Oral Science* (2023). DOI: 10.1038/s41368-023-00247-y

Traditionally, dentistry relied on the human eye for diagnosis and treatment. However, as procedures require more precision, conventional methods face limitations, especially in complex cases. The introduction of the DOM in 1981, initially as "Dentiscope," marked a significant milestone. Over the years, DOMs have become indispensable, particularly in endodontics and operative dentistry, improving clarity and addressing ergonomic challenges during long procedures.

In a new article [published](#) in the *International Journal of Oral Science*,

Jingping Liang from Shanghai Jiao Tong University and other researchers reviewed the transformative impact of the Dental Operative Microscope (DOM) in [dentistry](#), highlighting its enhanced visualization capabilities and potential for future advancements.

Using DOMs requires a systematic approach. Dental practitioners must follow standardized procedures, safeguarding DOM components, ensuring proper seating for themselves and assistants, precise patient positioning, and meticulous adjustments (eyepiece distance, diopter correction, magnification, brightness, and filter selection).

DOMs have ushered in a new era, enhancing visualization, reducing errors, and improving the patient experience. Standardization has been crucial for widespread adoption.

As technology advances, DOMs offer potential in specialties like periodontics, implantology, and prosthodontics, aiding [early diagnosis](#) and various procedures. Integration with digital imaging, video, and [wireless systems](#) enables [data collection](#), remote education, consultations, and seamless doctor-patient communication, promising ongoing innovation and better patient care.

The future of DOMs is promising, with ongoing research and development efforts. Dentists and assistants should continually expand their knowledge of DOMs, ensuring proficiency and adhering to standardized techniques. This commitment unlocks the DOM's full potential, elevating global dental care standards.

In summary, DOMs have revolutionized dentistry, offering precision, comfort, and efficiency in diagnosis and treatment. As technology evolves, its impact will grow, promising a brighter future for dental practitioners and patients.

More information: Bin Liu et al, Experts consensus on the procedure of dental operative microscope in endodontics and operative dentistry, *International Journal of Oral Science* (2023). [DOI: 10.1038/s41368-023-00247-y](https://doi.org/10.1038/s41368-023-00247-y)

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