

EDITORIAL

Future of minimally invasive dentistry

Minimally invasive dentistry procedures have revolutionized dentistry; they offer people less pain, faster recovery time and more conservative treatment options. It tends to combine technological innovation with biological principles to improve patient outcomes. Minimally procedures prioritize the conservation of natural tissues and reduce patient discomfort and apprehension.

Some of the key trends shaping the future of minimally invasive dentistry include preventive and early diagnosis methods, non invasive and microinvasive caries management, 3 D printing and CAD/CAM dentistry and so on. AI powered and diagnostic using intraoral camera and digital radiography for early disease detection are being widely used. Salivary diagnostics detect caries risk and periodontal disease much before the visible symptoms begin. Advancements in LASER and air abrasion technologies like CO₂ LASER for cavity preparation do not require anaesthesia.

With reference to orthodontics, clear aligners with 3D planning are becoming increasingly popular for orthodontic correction. Microsurgical techniques for Periodontics and implant procedures are gradually finding greater number of takers. There has been a shift on an approach to preserve natural tooth structure, enhance patient comfort and long term health.

This overhaul has created as need for the dentist to be trained in digital tools, bioactive materials and a non surgical, minimally invasive approach. The future of minimally invasive dentistry is highly promising, driven by advancements in materials and patient centric care. With possible developments in materials, technology, and regeneration techniques, the future of minimally invasive dentistry is bright. For these methodologies to be further refined and validated, research must go on. Research on material development, comparative efficacy, and long-term clinical trials are essential for developing evidence-based practices, improving treatment results, and broadening the scope of minimally invasive techniques. Dentists may provide patients with conservative, efficient, and patient-centered treatment by adopting the minimally invasive dentistry tenets and incorporating new developments in technology and materials.