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D r t - utur st c tool

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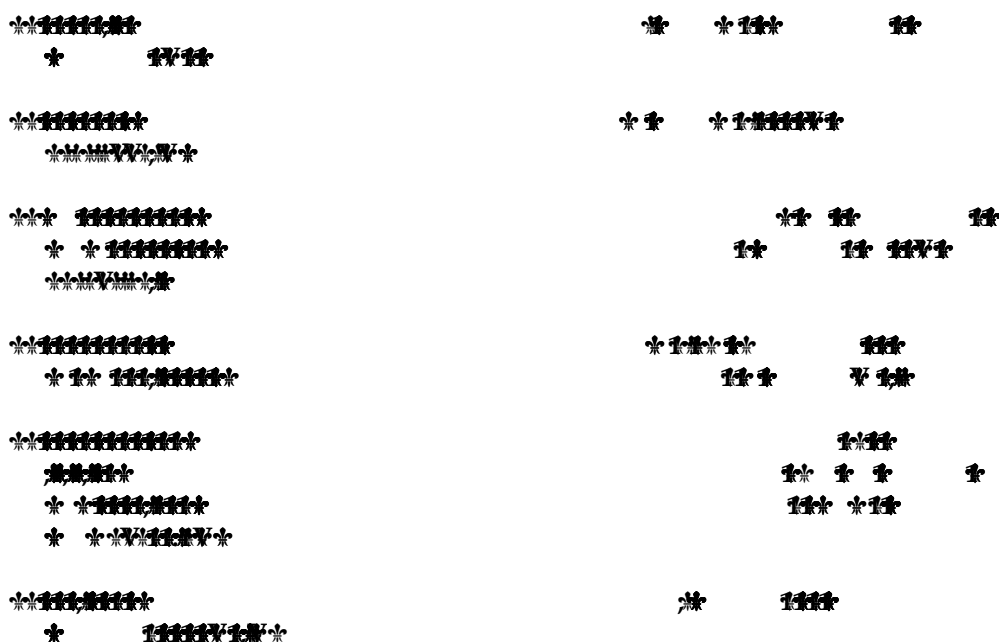
Commentary:

3D printing is the process of making a solid object from a three-dimensional digital image by laying down many thin layers of building material¹. It is also called additive manufacturing. Various methods of 3D printing in dentistry are stereolithography, photopolymer curing, selective laser sintering, fused deposition modeling, selective laser sintering, etc .

Steps involved in 3D printing are 1. Obtaining a 3D image using an intraoral camera scanner. 2. Converting a 3D image into a G-code image using the CAD software. 3. Making 3D printed models using additive printers.

In the field of Conservative Dentistry, accurate reproduction of teeth will have inherent convolutions. Thus, it necessitates the reproduction of intricate geometry that is error-free. 3D printing produces unambiguous models of complex structures using a variety of building materials like wax, silicon, etc. giving accurate margins and finish to the restorations. In the field of Endodontics, 3D printing helps in making access guides to target curves in elusive canal spaces without causing perforation⁴. The preformed 3D guides assist in accurate transplantation of teeth to the recipient site. In peri-apical surgeries, it helps to make surgical stents that help in reproducing the planned access pathway. Further research will enable us to use this technology as a futuristic tool in Conservative Dentistry and Endodontics.

References



Keywords: CAD Software; 3D Printing; Dentistry; Endodontics

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