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THE IMPACT OF DIGITAL TECHNOLOGIES ON DENTAL PROSTHETICS IN ORTHOPEDIC DENTISTRY

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Digital technologies have revolutionized the field of dental prosthetics in orthopedic dentistry, enhancing precision, efficiency, and patient outcomes. The integration of digital workflows, such as computer-aided design and computer-aided manufacturing (CAD/CAM), intraoral scanning, and 3D printing, has transformed how prosthetic

restorations are designed, fabricated, and fitted. This thesis explores the key impacts of digital technologies on dental prosthetics, focusing on improved accuracy, treatment speed, patient comfort, and the overall quality of restorations.

Key Points:

1. **Precision and Accuracy:**

o Digital impressions using intraoral scanners provide highly accurate, detailed 3D representations of the patient's oral anatomy, eliminating the potential errors associated with traditional impression materials.

o CAD/CAM systems ensure that prosthetics are designed with exacting precision, improving the fit and longevity of crowns, bridges, and dentures.

2. **Efficiency and Speed:**

o Digital workflows streamline the prosthetic design and fabrication process, reducing the time required for creating custom restorations.

o 3D printing allows for the rapid production of models, provisional prosthetics, and even final restorations, shortening treatment times and reducing chairside appointments.

3. **Enhanced Patient Experience:**

o Digital technologies improve patient comfort by eliminating the need for traditional impression trays, which can cause discomfort or gagging.

o Patients benefit from faster turnaround times and reduced appointments, contributing to higher satisfaction levels.

4. **Customization and Aesthetics:**

o Advanced software allows for highly individualized restorations, ensuring better aesthetics, fit, and function tailored to each patient's specific needs.

o Digital design tools enable precise adjustments to ensure the prosthetic blends seamlessly with the patient's natural dentition, enhancing both form and function.

5. **Predictability and Treatment Planning:**

o Digital technologies facilitate detailed treatment planning, enabling dentists to visualize the final outcome before treatment begins. This allows for better communication with patients and more predictable results.

o Virtual simulations and digital models help optimize implant placement and prosthetic design, reducing the risk of complications and enhancing long-term success.

Conclusion:

The incorporation of digital technologies in dental prosthetics has significantly advanced orthopedic dentistry, improving precision, efficiency, and patient outcomes. Digital workflows allow for the production of high-quality, customized restorations with faster turnaround times, better fit, and enhanced aesthetics. As digital tools continue to evolve, they are poised to further enhance both the clinical and patient experience in dental prosthetics.

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TO‘LIQ TISHSIZLIKNI BARTARAF ETISHNING ZAMONAVIY USULLARI

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Kirish. To‘liq tishsizlik, ya'ni to‘liq adentiya, bemor hayoti sifatiga katta ta'sir ko‘rsatadi. Bu holat nafaqat estetik muammolarni, balki og‘iz bo‘shlig‘i, ovqatlanish, nutq, va chaynash jarayonlarida jiddiy qiyinchiliklarni keltirib chiqaradi. Zamonaviy