A Review of Occlusal Considerations in Different Treatment Modalities for Implant-Supported Full-Mouth Rehabilitations

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ABSTRACT:

Occlusal considerations are crucial for the success of implant-supported full-mouth rehabilitation in completely edentulous patients, ensuring proper force distribution, preventing implant overload, and enhancing prosthetic stability. Different treatment modalities, such as implant-supported overdentures, fixed prostheses, All-on-4, and All-on-6 systems, require distinct occlusal approaches. Implant-supported overdentures depend on balanced force distribution across implants and the residual ridge, utilizing occlusal schemes like balanced occlusion, group function, and mutually protected occlusion. Minimizing lateral stress on posterior implants and ensuring anterior guidance with posterior disocclusion is essential for implant longevity. For implant-supported fixed prostheses, axial loading helps reduce lateral stress and maintain stability, while a non-interfering occlusion prevents overloading. Canine guidance or group function ensures even force distribution, protecting posterior implants from excessive lateral forces. The All-on-4 and All-on-6 systems require occlusal designs that minimize lateral forces, with anterior guidance allowing posterior disocclusion and group function distributing laterotrusive forces to protect the canines. The All-on-6 system, with additional implants, improves stability and load distribution. Across all implant-supported systems, proper planning of implant positioning, occlusal design, and prosthetic materials is vital for long-term success. A well-balanced occlusion enhances function, prevents complications, and improves patient satisfaction, ensuring the longevity of implant-supported rehabilitations.

KEY WORDS: Overdentures, Impant supported, fixed prostheses, balanced occlusion