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Evaluation of Dimensional Changes of Three Different Denture Base Materials: In Vitro Study

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Thermoplastic dentures are an alternative to heat cured PMMA dentures. It provides excellent aesthetics, comfort and adapt to the constant movement and flexibility in partially edentulous patients. There are differences in dimensional changes between heat cured PMMA and new thermoplastic materials. This in vitro study intended to compare three different denture base materials in regarding to their dimensional changes after immersion in distilled water for different intervals of time. 36 specimens were incorporated in this study. 3 groups were formed, 12 specimens in each group. Group A: Acrostone: heat cured PMMA. Group B: Newultra: thermoplastic polyamide. Group C: Biodentaplast: thermoplastic Acetal. Dimensions of specimens were (25×25×10 mm). Measurements were recorded at different intervals of time after immersion in distilled water using a digital caliper. Statistical analysis was carried out using one way analysis of variance (ANOVA). Statistical significance was defined at $P \leq 0.05$. Statistical analysis revealed that heat cured PMMA showed the highest significance value between the 3 denture base materials regarding their dimensional changes. Immersion in distilled water for different periods of time significantly affected the heat cured PMMA.

Biography

Mai Salah El-Din has completed her BDS (2003), Msc in prosthodontics (2009) from Alexandria University, Egypt. She was served as a dental Assistant in El-Attar Dental office (2003-2006). She is a member of the Alexandria Oral Implantology Association (AOIA). She had been working as a clinical instructor in prosthetic clinical sessions at dentistry college, Alexandria University (2005-2010). She was a full time teaching assistant in removable prosthodontics department. Pharos University in Alexandria (2010-2016). Currently doing a doctor degree studies in prosthodontics at Minia University, Egypt.

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