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Oral

Standard Versus Real Versus Fake Braces: Design And Microstructure Comparison

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Introduction: The growing demand for orthodontic braces among Malaysian community has led to the development of "fake" and "real" braces. "Fake" braces refer to braces that are worn as costume and are not bonded to teeth hence unable to produce movement of teeth. "Real" braces refer to braces that are bonded to tooth structure and are able to produce tooth movement. The braces are bonded by unqualified practitioners with no formal dental education and they provide braces treatment in unlicensed premises such as hotel rooms or patients' own homes. **Materials and Methods:** This study was conducted to investigate the design and microstructure of several types of "fake", "real" and standard braces. A total of 9 upper right central incisor brackets were scanned using high resolution scanning electron microscopy (SEM) with magnifications of 65x, 500x and 1000x. Brackets slot heights and depths were also measured to compare slot dimensions between "fake", "real" and standard braces. **Results:** The surface textures of "fake" and "real" braces were noticeably more granular and unpolished as compared to conventional brackets. Furthermore, all "fake" and some "real" braces upper right central incisor bracket designs were distinctly different from the standard braces. The slot dimensions of "fake" and "real" braces were also significantly larger than standard braces. **Conclusion(s):** In conclusion, the surface texture and morphology of "fake" and "real" braces were crude and different when compared to conventional brackets.

KEYWORDS: fake braces, real braces, brackets, microstructure