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Bio-HPP PEEK - An emerging material for Resin-bonded fixed Prosthesis

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Abstract

The resin-bonded fixed dental prosthesis is one of the many popular treatment options for replacing missing teeth. With the advantage of minimal tooth preparation required for restoring natural aesthetics and optimal oral function, certain disadvantages decrease the success rate of treatment to about 85%. This consists of an increased debonding rate of prosthesis, which can mainly be attributed to bonding between resin, prosthesis and teeth. Properties of the material, like stiffness, also play a crucial role. This case report proposes a novel material - Bio-HPP PEEK that has shown flexibility similar to a natural tooth to decrease the debonding rate and increase bond strength with underlying resin cement compared to conventional materials. Proper case selection and strict adherence to cementation protocols, along with the absorbing property of modified PEEK polymer, have increased the prosthesis success rate in this clinical report.

Keywords - Bio-HPP, PEEK, Polymer, RBFPS, Debonding

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