

## · 基础与临床研究 ·

### 3 种一步法自酸蚀粘接剂固化后的吸水性和溶解性

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**【摘要】目的** 比较3种市售的一步法自酸蚀粘接剂的吸水性及溶解性, 为临床操作提供指导。**方法** 选择3种一步法自酸蚀粘接剂 Adper Easy Bond (AEO)、Optibond All-in-one (OP) 和 BeautiBond (BB), 各制备50个圆盘试件(直径为8.0mm, 厚度为1.0mm), 浸泡于去离子水中, 并分组于不同浸泡时间段(1天、7天、30天、90天、180天), 通过浸水前后质量变化测定其吸水值与溶解值。**结果** 在每个浸泡期, OP的吸水值、溶解值均为最高, AEO吸水值居中、溶解值最低, BB吸水值最低而溶解值居中, 不同品牌粘接剂组间比较, 差异均有统计学意义 ( $P < 0.05$ ); 3种粘接剂的溶解值均随时间延长显著增加, 不同浸泡时间组内比较, 差异均有统计学意义 ( $P < 0.05$ )。**结论** 3种市售的一步法自酸蚀粘接剂固化后的吸水性和溶解性明显不同, 可能与其组成有关。

**【关键词】** 一步法自酸蚀粘接剂 吸水性 溶解性 HEMA 浸泡时间

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### Water sorption and solubility of three one-step self-etch adhesives

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**【Abstract】Objective** The purpose of this study was to evaluate the water sorption (Wsp) and solubility (Wsl) of three different one-step self-etch adhesives and provide guidance for clinical operations. **Methods** Three kinds of commonly used one-step self-etch adhesives including Adper Easy Bond (AEO), Optibond All-in-one (OP) and BeautiBond (BB) were selected. After the solvent of each adhesive was evaporated, disk-shaped specimens (8.0 mm in diameter x 1 mm in thickness) were prepared and divided into five subgroups with 10 specimens in each subgroup according to the different water-storage time. After 1, 7, 30, 90 and 180 days of water-storage time, the disks were subjected to measurement of Wsp and Wsl by testing the quality changes before and after immersion in water. **Results** At different water-storage time, the Wsp of OP was the highest and then followed by AEO and BB, while the Wsl of AEO was the lowest, and then followed by BB and OP. There were significantly statistical differences in the Wsp and Wsl among different adhesives ( $P < 0.05$ ). Moreover, the Wsl of OP, BB and AEO was increased with the increase of storage time, and there were significantly statistical differences in the Wsl among different storage times ( $P < 0.05$ ). **Conclusions** There were significantly differences in the water sorption and solubility among three selected one-step self-etch adhesives in this study, and it seemed to be mainly influenced by the adhesive composition.

**【Key words】** One-step self-etch adhesives Water sorption Solubility HEMA Water-storage time

一步法自酸蚀粘接剂由于其临床操作简便,

技术敏感性较低, 因此在临床上的应用日益广泛, 然而, 对于粘接的耐久性问题却受到一定的质疑。其中水吸收被认为是导致粘接界面降解的主要因

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