超声根管清洗术对纤维桩粘接固位力的影响

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【摘　要】 **目的**　研究超声根管清洗术对改善纤维桩在根管内固位力的作用，为临床提供参考依据。**方法** 选取 40 颗两周内因正畸需要拔除的单根管离体牙，根冠形态完整，根长近似（≥ 13 mm），经完善的根管治疗后随机分成 A、B 两组，于釉牙骨质界上方 2 mm 水平截冠并预备根管桩道。A 组：不作超声根管清洗术；B 组：采用超声根管清洗术。自酸蚀粘接剂把纤维桩粘接于桩道内， A、B 组各 15 个试件在万能试验机上做拉伸粘接力测试。另在 A、B 组各选 5 个粘桩后的离体牙于根颈、根中及根尖分别切取厚 1.5 mm 的薄片。扫描电镜观察纤维桩与根管内壁粘接界面的显微结构。**结果**　拉伸粘接力试验结果表明：B 组试件的纤维桩粘接力 [(205.8±15.5) N] 比 A 组试件 [(151.1±13.5) N] 高，（P<0.05）。电镜观察发现：A 组粘接剂与根管壁粘接界面的缝隙均较相应的 B 组的缝隙大。**结论**　使用超声根管清洗术能显著增强纤维桩与根管壁根颈处的粘接固位力。

【关键词】 纤维桩　超声根管清洗术　粘接力

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Effect of ultrasonic root canal cleaning technique on the retention of fiber post in the root canal

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【**Abstract**】 **Objective**　To investigate if the ultrasonic cleaning of root canal could improve the retention of fiber posts in the root canal and then provide some suggestions to clinical work. **Methods**　40 teeth extracted in two weeks for orthodontic reason, which were with single root canal longer than 13mm and have complete shoot morphology were selected. These teeth were divided into 2 groups randomly after root canal therapy. Then the coronal tooth structures 2 mm above the cemento-enamel were removed and the post spaces were prepared.Teeth without ultrasonic cleaning were defined group A while those treated by ultrasonic cleaning were defined group B. The fiber post was bonded to the root canal with a self-etching adhesive. 15 specimens from each of the two groups received tension test by a universal testing machine. An extra 5 specimens from each group were cut into slices of 1.5mm thick at the neck, middle and apical part of the root respectively. The microstructure of the interface between the fiber post and root canal wall was observed with a scanning electron microscopy. **Results**　Tension test results showed that the adhesion stress of the specimens of group B (205.8±15.5N) is stronger than those of group A(151.1±13.5N). Scanning electron microscopy revealed that more resin tags were detected at the neck of root canal than those at the apical part. **Conclusion**　Ultrasonic cleaning of root canal can significantly enhance the adhesion of the fiber post to the neck part of the root canal wall.

【**Key words**】 Fiber post　Ultrasonic cleaning of root canal　Adhesion

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