

抗水型钙磷水泥生物活性骨修复材料研究

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摘要 采用纤维素作为添加剂、以非水相溶剂作为固化液, 研究了一种抗水型磷酸钙骨水泥生物活性骨修复材料. 对其抗水性能、理化性能、水化产物及生物相容性进行了研究. 结果表明: 该骨水泥可任意塑形, 也可用针管注射成形, 抗水性能优良, 添加剂纤维素的加入, 对骨水泥的凝结时间、抗压强度及最后的转化产物没有明显影响.

培养细胞在材料表面粘附铺展且增殖良好, 初步表明材料有较好的生物相容性.

该材料有望用于骨缺损填充及椎体成形等微创手术.

关键词 [生物活性](#) [骨水泥](#) [抗水性](#) [抗压强度](#)

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Bioactive Calcium Phosphate Cement with Anti-washout for Bone Replacement

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Abstract A new type of bioactive calcium phosphate cement with an excellent property of anti-washout for bone replacement was prepared by using cellulose as additive and non-aqueous solvent as liquid. The property of anti-washout, physical chemistry performances, hydration products and the biocompatibility were investigated. The results indicate that the improved CPC has an excellent anti-washout property and can be easily shaped as well as injected. The addition of the cellulose does not have obviously effect on the setting time and compressive strength of the CPC hardened body. The cultural cells are attached, dispersed and preferentially proliferated on the surface of the improved CPC. The fabricated biomaterials can be used as the filler of the bone defect or vertebroplasty or kyphoplasty in micro invasive surgery.

Key words [bioactivity](#) [bone cement](#) [anti-washout](#) [compressive strength](#)

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