

The cytotoxicity and antibacterial activities of the calcium phosphate cement (CPC) with *Chamaecyparis formosensis* extract (CFE)

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The *Chamaecyparis formosensis* extract (CFE) have been studied as having antibacterial activities. The aim of this study is to evaluate the cytotoxicity and antibacterial activities of calcium phosphate cement (CPC) with CFE. The CPC or CPC-CFE pastes were mixed from calcium phosphates powders and hardening solution, casted subsequently in stainless steel molds with 3mm thickness and 6mm diameter. All the WST-1 assay (72hr extraction) results were analyzed by ANOVA followed by Tukey tests. Methicillin-resistant *Staphylococcus aureus* (MRSA) cells were incubated with samples in TSB for 4 hr, the OD₆₀₀ per hour were recorded automatically. The antibacterial activities were express as percentage of cells increasing rate. The viability of MG63 cells were not significantly different after incubated with CPC or CPC-CFE for 1 day. The 12 hr bacteria increasing rate of CPC-CFE (-25% and 30%) were lower than that of CPC (95% and 114%) in 10⁸ and 10⁴ cell concentration, respectively.