# 镁基金属对粪肠球菌的体外抑制作用

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**【摘　要】 目的**　评价纯镁和镁铜合金对粪肠球菌的体外抗菌效果。**方法**　选取因正畸新鲜拔除的人的单根管下颌前磨牙 40 颗，随机分为 4 组，每组 10 颗牙。所有牙齿清理根管后灭菌，建立粪肠球菌感染根管模型。每组分别用以无菌生理盐水为赋形剂调制的氢氧化钙糊剂（A 组）、镁粉糊剂（B 组）、镁铜合金粉糊剂（C 组）、生理盐水（D 组）进行根管封药 7 天。封药前后分别取样，接种在普通营养琼脂平板上培养，计数菌落。**结果**　封药前 4 组根管内细菌量的差异无统计学意义（$P$>0.05）。D 组封药前后根管内细菌量无统计学差异（$P$>0.05）。A、B、C 3 组封药后根管内细菌量均明显减少，与封药前细菌量比较，差异具有统计学意义（$P$<0.05）。A、B、C 3 组间两两比较，封药后根管内细菌减少量差异无统计学意义（$P$>0.05）。**结论**　纯镁和镁铜合金对粪肠球菌均有一定的抗菌效果。但各组根管内仍有粪肠球菌残留，关于镁和镁铜合金在口腔临床医学中的应用价值还需要进一步研究。

**【关键词】** 纯镁　镁铜合金　氢氧化钙　抑菌　粪肠球菌

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## *In vitro* effects of Mg-based metals on enterococus faecalis in root canal model

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**【Abstract】 Objective**　To evaluate the antibacterial efficacy of pure magnesium （Mg） and Mg-Cu alloys using *anin vitro* model infected by Enterococcus Faecalis(Efaecalis). **Methods**　Forty freshly extracted human single-rooted mandibular premolars were collected and divided randomly into 4 groups, with 10 teeth in each group . After cleaning and sterilization, the root canals were infected with E．faecalis to establish the E．faecalis infected models. All root canals were dressed for 7 days with different intracanal medicament as follows: group A with calcium hydroxide paste plus sterile normalsaline; group B with magnesium (Mg) paste plus sterile normalsaline; group C with Mg-Cu alloys paste plus sterile normal saline; group D with sterile normal saline. Microbiological samples were collected from root canal before and after dressing, and were incubated at 37℃ and plated onto common nutrient agar .The colony of bacteria was counted (CFU/ml). **Results**　There was no statistically significant difference in the number of E．faecalis of all groups before root canal dressings ($P$>0.05). After dressing, no significant difference was observed in the number of E.faecalis in the group D ($P$>0.05). The number of E．faecalis in group of calcium hydroxide, Mg and Mg-Cu alloys were effectively reduced ($P$<0.05). While there was no signifi-

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