مقایسه آلودگی زدایی مخروطهای گوتاپرکا با سه نوع محلول ضدعفونی کننده در مدت زمان یک دقیقه

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** دندانپزشک

Title: Comparison of the effectiveness of three different disinfectant solutions in disinfection of gutta-percha cones in one minute

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Background and Aim: Care must be taken during root canal therapy to prevent contamination of filling materials and avoid root canal contamination. Gutta-percha cones are now widely used to fill root canals. However they are not resistant to conventional sterilization processes in moist or dry heat. To keep the aseptic chain, gutta-percha cones require rapid chair side decontamination before use. Considering different methods for rapid decontamination of gutta-percha cones, use of chemical agents is the best. The purpose of this study was to compare the effectiveness of three different disinfectant solutions in rapid decontamination of gutta-percha cones in one minute

Materials and Methods: In this experimental study, 360 gutta-percha cones were placed in bacterial suspensions of Staphylococcus aurous, Escherichia coli and Bacillus subtilis spore for 30 minutes, and then immersed in disinfectant solutions (Micro-10, Deconex 53 Plus, 5.25% sodium hypocholorite) for 1 minute. After that, the cones were aseptically transferred to the test tubes containing sterile saline. This solution was diluted 10-fold and then cultured on in brain-heart-infusion agar and the number of colonies was estimated after 24 h incubation at 37℃. A series of 5 previously sterilized cones was used as negative control to check the sterility of gutta-percha cones directly from the manufacturer's box. Another series of gutta-percha cones were considered as positive control group.

Results: No bacterial growth was seen in different test groups and negative control group.

Conclusion: Analysis of disinfectant effects of sodium hypochlorite, Micro10 and Deconex 53 plus showed that all of these solutions have bactericidal and sporocidal effect and are very efficient in surface disinfection of gutta–percha cones in one minute. Because of irritative effects and unpleasant odor of sodium hypochlorite, Deconex 53 plus and Micro10 can be used for rapid decontamination of gutta-percha cones.

Key Words: Disinfection; Micro 10; Deconex 53 plus; Sodium Hypochlorite; Gutta percha cones

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چکیـده

زمینه وهدف: حذف یا کاهش میکروارگانیسم‌ها از کانال ریشه هم در مرحله آماده سازی کمومکانیکال و هم در مرحله پرنمودن کانال از اهداف مهم درمان ریشه می‌باشد. مخروط‌های گوتاپرکا که امروزه به طور گسترده جهت پرکردن کانال ریشه دندان به کار می‌روند نیز از این قائده مستثنی نمی‌باشند؛ ولی از طرفی این مخروطها مقاومت کافی در برابر روش‌های معمول استریلیزاسیون (حرارت خشک یا

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