

بررسی اثر ضد عفونی کنندگی رقت ۲:۱۰۰ از محلول هیپوکلریت سدیم ۵٪ و استفاده از روکش یک بار مصرف بر آلودگی تجهیزات و سطوح کار دندانپزشکی با ویروس هپاتیت B

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Title: Evaluation of disinfecting effect of 5% sodium hypochlorite solution diluted to 2:100 along with the use of disposable covers on HBV contaminated dental office surfaces and equipments

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Background and Aim: The efficiency of disinfecting materials and procedures in removal of contamination from dental surfaces and equipments is essential. In authors' previous study, daily use of 2:100 dilution of 5% sodium hypochlorite in water and disposable covers were recommended since HBV contamination was found on semi-critical parts of the operative dentistry department. The aim of this study was to evaluate the HBV contamination following application of the recommended procedures.

Materials and Methods: The study was conducted in two parts. In the first cross-sectional part, samples were collected from 17 sites of dental surfaces. In the second interventional part samples were collected from 10 sites of 9 dental and 3 sites of 2 light cure units, before and after disinfection with 5% sodium hypochlorite solution diluted to 2:100. Sterile cotton swabs moistened with sterile BSAS (Bovine Serum Albumin in Sodium Chloride) solution were used for sampling. Samples were tested by PCR technique in Pasteur Institute, Iran.

Results: None of the samples collected in the first part of the study showed contamination. In the second part of the study, from 96 samples taken from various parts of dental and light cure units, before and after disinfection, there was only one HBV contaminated site before disinfection which showed no contamination after disinfection.

Conclusion: Based on the results of this study, disinfecting procedure with 5% sodium hypochlorite solution diluted to 2:100 along with using disposable covers is effective in preventing HBV contamination.

Key Words: Disinfection; Dental equipments; Sodium hypochlorite; HBV