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RESPONSE TO LETTER

More Caution Needs in Study Design and Method Selection for "In vitro Antibacterial Effect of Deconex and Sodium Hypochlorite Against Bacterial Taxa Isolated from Dental Units" [Response to Letter]

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Dear editor

We thank Emami and colleagues for their interest in guiding us to their recently published study reporting "In vitro antibacterial effect of deconex and sodium hypochlorite against bacterial taxa isolated from dental units".[1] We have attempted to answer their queries as much as possible. Deconex is the predominant agent used in our dental units for many years, hence, we evaluated health staff performance in dental faculty. Also in our introduction and results recommended the deconex was strong to eliminate microorganisms, thus this disinfection agent is confirmed. According to the results obtained in this study, there are some technical errors were happened by the dental technician in the decontamination procedure. Therefore, it is necessary to re-inspection and improve the methods of decontamination and the use of appropriate concentrations of this product. Actually, in this research, we criticize the function of the dental technician in the decontamination routinely procedure, not the efficacy of deconex. Can it be said that antibiotics are approved by CLSI? Is not it necessary to measure antibiotic resistance? Of course not. The evaluation of microbial contamination of dental units and quality control of health workers is the subject recommended by the American Dental Association. Emami and his colleagues have used the term "resistance against alcoholic-based disinfectants". If the word is incorrect then it should be used "tolerance to an alcohol solution".[2] Many studies have been investigating this phenomenon, and it may have been in our results. This phenomenon continues to be associated with increased antibiotic resistance. Our study has no claim that the bacteria are resistant to an alcohol solution. We confirm the Rideal-Walker phenol coefficient (R.W.C) test was the standard test, but according to reference this method has many limitations that can affect our study. Thus we decided to use the MIC method according to reference.[3,4] Also, this method is used in many authentic studies. According to CLSI reference-based, 50mL of each dilution was added in 96-well plated containing 50mL defined Luria–Bertani broth. Each well was inoculated with 50mL of the bacterial sample and mixed gently, yielding a final bacterial concentration of approximately 1*106 (CFU/mL). On the other hand, our

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concentration of the bacterial sample was corrected. In our study, 120 samples were yielded that 20 samples were fungi and excluded from the study. However, 100 samples were considered in this study. In fact from each unit, one sample was taken. In total after calculated microbial counting, the higher contamination of units was found in oral medicine, root canal therapy, surgical units. The high volume of the contamination may be because areas selected for sampling may not be disinfected by the personnel.[5] Finally, to determine the morphology of the bacterial colony we used gram stain that was incorrectly hot dyeing. We apologize for this.

Disclosure

The authors report no conflicts of interest in this communication.

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