SHORT COMMUNICATION

Knowledge, Attitude and Practices of Dental Faculty regarding the Disinfection of Acrylic Materials Working in Dental Institutions/Colleges in Karachi, Pakistan

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INTRODUCTION

Dental care providers are at high threat of receiving cross-infection while treating patients. This occupational impending for disease transmission becomes understandable as it is known that most human microbial pathogens are isolated from oral secretion.[1] On the other hand, majority of carriers of infectious diseases cannot be easily identified.[2] Research shows that many infections can be transmitted by blood or saliva as a result of direct or indirect communique, droplets, aerosols, or contaminated instruments and equipment. Therefore, it is implicated that infective vulnerability is there in dental practice.[3] All dental tools used in Prosthodontic department like impressions, cast models and prostheses must be appropriately disinfected before being sent to the prosthetic laboratory as well as after their return to the dental office, before their placement in the patient's mouth.[4]

Simply washing or rinsing prosthetic material in running water cannot guarantee the complete removal of contaminating organisms.[5] Chemical disinfection has been recommended with the intend to shun the cross-contamination by dissemination of pathogenic agents, by the use of glutaraldehyde, sodium hypochlorite, iodoform, chlorine dioxide or alcohol solutions.[6] The application of universal precautions in dental surgeries is positive in preventing microbial load and cross-contamination. This practice is supported by organizations such as the Centers for Disease Control and Prevention, the American Dental Association and most of the other health agencies and professional associations.[7] Universal precautions consider that all patients have to be considered as infectious patients and precautions must be applied for all of them.[8]

Alas! the infection control policies for control of spread of infection in developing countries are not acknowledged widely.[9] Usually hospitals have no infection control programs as there is no awareness about the gravity of the problem and also because of lack of qualified staff.[10]

KAP surveys about several issues have been carried out in numerous countries.[11] However, there is no report in literature about KAP study with regard to disinfection practices in Prosthodontics Departments in Dental Colleges/Institutes in Karachi, Pakistan. The importance of this KAP study is that it brings into consideration the present status of disinfection of Acrlyic Material and also creates awareness about the importance of disinfection protocols.

MATERIAL AND METHODS

This was a questionnaire based study which took place in one month's time (April 2010). The study was conducted in Departments of Prosthodontics of Dental colleges/institutes in Karachi, Pakistan. The Head of the Department in each dental college/institute was personally approached by the researchers, who informed the head about the purpose of study and about the methodology which was to be practiced. Total 51 Doctors were questioned from Dental Colleges of Karachi including Dr Ishrat ul Ibad Khan Institute of Oral Health Sciences (DIKIOHS), Fatima Jinnah Dental College (FJDC), Jinnah Medical and Dental College (JMDC), Baqai Medical and Dental University (BMDU), Hamdard Medical and Dental University (HMDU), Altamash Institute of Dental Surgery (AIDS), Sir Syed Medical and Dental College (SSMDC), Liaqat Medical and Dental College (LMDC) and Karachi Medical and Dental College (KMDC). A self-administered questionnaire was designed to obtain

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information about procedures used for the disinfection of acrylic materials in dental practices and to determine the attitudes and perceptions of respondent dental practitioners towards the process of disinfection. The employed questionnaire was in its initial stages being properly legitimated in a pilot study which was conducted at DIKIOHS to assess Dental surgeons' perception of the instrument about attitudes and behavior regarding disinfection of Acrylic Material. Their comments proved to be of great help for improving the questionnaire.

The approval for the study was taken by Associate Dean Post Graduate Programs Dental faculty and MDS Program Director, Dr Shahjahan Katpar of DIKIOHS, DUHS. The study population included all Professors, Associate Professor, Senior Registrar, Registrar, Senior Resident, Trainees, Demonstrator and House Officers working in the Prosthodontics Department. All participants who filled the questionnaire were informed about the survey distribution and also about the number and type of questions, covered content and were given declaration that the secrecy would be preserved. Informed consent forms were not distributed and only verbal consent was taken. The questionnaire was personally handed out to each Dental Surgeon. The questionnaire asked for data on demographic characteristics, knowledge about the disinfection of acrylic materials, how and at what concentration disinfection solution is used in their department, their attitude toward above mentioned knowledge and their practice of disinfecting custom trays and dentures. Data was entered and analyzed using SPSS version 16.

RESULTS

Sixty eight percent of the dental faculty questioned believed that disinfection of acrylic custom tray, acrylic base plate and acrylic denture is important. Only 34% and 5% of the faculty practices disinfection of custom tray before and after impression making respectively. When the duration of procedure, appropriate disinfectant and method were asked for acrylic material disinfection, following responses (Figure 1, 2 and 3) were attained.

Fig. 1: Duration for Disinfection of Acrylic Materials

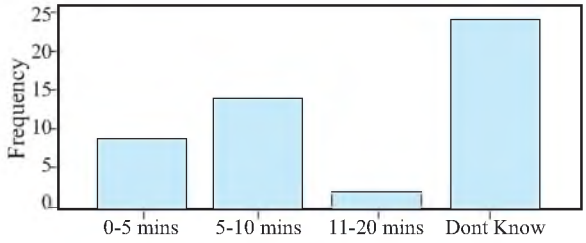


Fig. 2: Chemical Disinfectant Commonly Use for Acrylic Materials

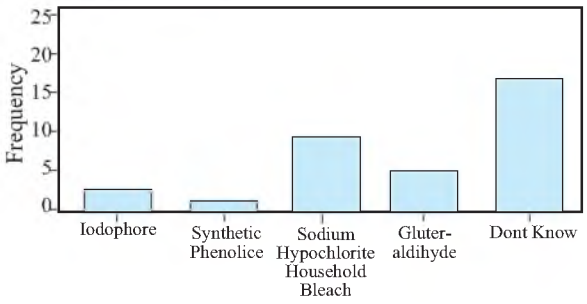
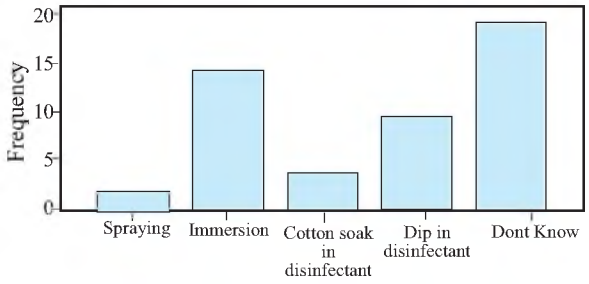


Fig. 3: Methods for Disinfection of Acrylic Materials



As evident from data, most of the dental surgeons questioned are un-aware about the duration of procedure of disinfection, appropriate disinfectant and method for acrylic material disinfection. Data obtained is worrisome. This implies that majority of the faculty is not familiar with the actual and correct protocol for disinfection of acrylic materials and is therefore not performing the protocol of disinfection.

CONCLUSION

The result notifies that awareness regarding the connotation of disinfection of Acrylic Material is present but dental faculty holds insufficient knowledge about the appropriate procedure for disinfection of Acrylic Material and no disinfection protocol is followed in Dental Colleges/ Institutes for disinfection. One reason for the lag is that no universal protocol is available for disinfection. The need of the time is that Dental Colleges/ Institutes develop there respective protocols and senior faculty should ensure that this protocol is practiced by all Dental Surgeons working in Prosthodontic Department. By doing so the institutions would assure the safety of their students and faculty and would also minimize the chances of transmission of diseases in the society.

Acknowledgement: First of all we pay our humble thanks to Almighty Allah and next to our families and friends for their encouragement and support. We acknowledge the services of Dr. Gul-e-Erum of Orthodontics Department of DIKIOHS for her valuable guidance in the process of finalization of questionnaire and Dr. Tahir Khan of Epidemiology Department of Sindh Medical College (SMC) for his meticulous support with SPSS. We offer our deepest gratitude to all HODs of Prosthodontics of Dental Colleges/Institues we visited and surveyed.

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