

then to wear them. The change from the mental rejection to physical acceptance of the dentures can be greatly enhanced by the use of this technique. Five round multi-colored glass marbles, approximately 1/4 inch in diameter, are first placed on a tray in front of the patient. The patient is then asked to put the marbles in his mouth, one at a time, at his leisure, until all five marbles are in his mouth and is advised to practice the same for 1 week, except when eating and sleeping. This has been found to decrease patients sensitivity to gagging.

Training Bases: Training bases are given to denture patients to be worn gradually increasing the length of time they are worn to achieve gradual adaptability enabling better acceptance of dentures at a later stage of treatment.

Management of gagging for radiography

- Allowing the patient to place and hold the x-ray films in the mouth by themselves at the time of exposure helps reduce gagging.
- When placing films (bitewings), placing some topical anaesthetic on the film helps prevent gagging.
- Asking the patient to hum while the film is in their mouth has also been found to be effective in controlling gag reflex as it is presumed that the patient cannot can't gag and hum at the same time.
- Asking the patient to take a sip of very cold water prior to placing the x-ray film has also been seen as a means of desensitizing the patient and reducing the gag reflex.
- If the patient cannot tolerate intra-oral X-rays, a panoramic x-ray is advocated.

However, if it is necessary to take bitewing X-rays, pedodontic sized films are often easier to tolerate.

Conclusion

The management of patients with exaggerated gag reflex is definitely challenging for the clinician and frustrating for the auxiliary staff and the patient. It appears that caring and concerned attitude of the clinician toward the patient and his or her problem is an important part of the treatment. Reassuring the patient and counselling him that he is not suffering from any physical disease goes a long way in efforts to reduce the patients embarrassment caused by the reflex. The clinician may choose one or more of the above techniques to manage such patients.

References

References are available on request at editor@healtalkht.com

Address for Correspondence : Dr. Anshu Malhotra, 42, Pusa Road, New Delhi-110005. drvarunmalhotra@gmail.com

Dental Stone Casts Disinfection : Physical Property Alterations & Antimicrobial Effects

Dr. Cherry Anmol

Sr. Lecturer,
Dept. of Prosthodontics & Crown & Bridge
D.J. College of Dental Sciences & Research
Modinagar (U.P.)

Dr. Sumeet Soni

Sr. Lecturer
Dept. of Orthodontics & Dentofacial Orthopadic
Maharaja Ganga Singh Dental College & Research Centre
Sriganga Nagar (Rajasthan)

Dr. Naresh Sharma

Reader
Dept. of Paedodontics & Preventive Dentistry
Manav Rachna Dental College, Faridabad

Direct physical interaction between the dental clinic and dental laboratory is intrinsic in the practice of general dentistry. It is also one of the area's most difficult to deal with from a cross-infection control point of view. Transmission of infected materials from the clinic to the laboratory not only place unwary staff at risk but results in a high level of avoidable cross-contamination.

The prevention of contaminated dental impressions leaving the immediate chair side area or zone of contamination is the ideal situation. Several studies have shown that microorganisms can be recovered readily from stone casts separated from contaminated impressions (Firme II et al. 1972; Rowe and Forest, 1978; Leung and Schonfeld, 1983).

An alternative or additional approach to cast/impression disinfection is to accept that the impression may be contaminated and aim to decontaminate the cast produced from the impression by incorporating a disinfecting chemical into the gypsum at the time of mixing. Tebrock et al. (1989) reported that the addition of 5.25% sodium hypochlorite to a gypsum mix destroyed all viable forms of the spore-forming organism *Bacillus subtilis*, which is a standard screening organism in sterilization testing. Furthermore, Mansfield and White (1991) demonstrated that the addition of 5.25% sodium hypochlorite and 2% neutral glutaraldehyde yielded a biologically safe cast after 1 h. However, with the exception of Tebrock et al. (1989) who included a qualitative description of the dimensional stability and surface smoothness of the cast, the effects of the incorporation of disinfectants into the gypsum mix on the

physical properties of the casts have not been evaluated quantitatively. Nevertheless, some work has been done on the bactericidal effects and physical properties of a number of commercially available gypsum products containing Chloramine-T, which upon activation is similar to a diluted form of sodium hypochlorite.

The effectiveness of sodium hypochlorite must now be challenged. Additional studies using both Milton solution and other solutions containing sodium hypochlorite are indicated. The effects of the disinfectant, solutions on the physical properties of the stone casts were variable. The addition of glutaraldehyde to the stone casts had the least effect on the physical properties of the casts.

The addition of chlorhexidine gluconate to the stone mix decreased the compressive strength by approximately 40%, almost doubled the setting time and caused a small contraction of the cast. Although these alterations in the physical properties of the cast may not absolutely justify the rejection of this disinfectant as a useful agent, its inability to destroy many of the microorganisms on the surface of the cast renders 0.2V chlorhexidine inadequate for this method of disinfection. Higher concentrations of this agent, may warrant further investigation. The germicidal effectiveness of povidone-iodine has already been established. Of greater concern is the alteration of the physical properties of the casts which occur upon the incorporation of povidone-iodine into the stone mix. While the setting expansion and detail reproduction remain unaffected, the povidone-iodine alters the setting time and the compressive strength of the stone cast. Although the moderate increase in setting time is undesirable, the

decrease in compressive strength is of greater concern because it lowers the strength close to an unacceptable level just below the ISO limits. Some of this decrease can be attributed to the increase in setting time caused by the povidone-iodine. Because the ISO guidelines require the specimens to be tested 1 h following the mixing of the stone powder and the povidone-iodine solution, an increased setting time would decrease the amount of time that specimens have to reach the same compressive strength as the standard water mix, resulting in reduced strength values.

Hence, a stone cast disinfected by the incorporation of povidone-iodine into the stone mix can still be considered clinically acceptable as long as the yellow discoloration is not of concern. If the increased setting time is inconvenient, an accelerating agent may be incorporated during mixing. The effect on the physical properties of the stone cast caused by the incorporation of a 1% dilution of sodium hypochlorite (Milton solution) was also investigated. At this concentration, the sodium hypochlorite altered the physical properties of the set cast. While there was an increase in setting time, of greater concern was the fact that the compressive strength was lowered to a level marginally below the ISO requirement.

In summary, glutaraldehyde is the solution most suited to this method of disinfection. Unfortunately, due to concerns regarding the toxicity of glutaraldehyde, there may be difficulties in using it on a day-to-day basis in the clinic and laboratory.

A sound alternative is the povidone-iodine solution which, notwithstanding a decrease in the compressive strength of the set cast is a viable option.

Address for Correspondence : Dr. Sumeet Soni, Sr. Lecturer, Dept. of Orthodontics & Dentofacial Orthopadic, Maharaja Ganga Singh Dental College & Research Centre Sriganga Nagar (Rajasthan). dr.sumeetsoni@gmail.com