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LETTER TO THE EDITOR

ALLERGIC REACTIONS TO IMPRESSION MATERIALS

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Dear Editor

Materials used for dentistry for impression making procedures are generally safe. However on rare occasions anaphylactic reactions ranging from mild rashes to life threatening situations have been reported [1]. We have highlighted few rare reports of allergic reaction to impression materials. Alginate is one of the most commonly used impression materials. It is chemically extracted from seaweed. It is composed of salts of alginic acid (basically a complex polymer polysaccharide) [2]. In a survey conducted few decades back in British factories producing alginate, it was observed that 7.0% of the factory workers suffered from seaweed allergy [2]. According to the report 4.5% of the workforce had allergy to sodium alginate. When a challenge test for alginate was carried out these workers elucidated immediate airway obstruction [2]. In a recent case report a fatal reaction to alginate has been highlighted [2]. The patient had both

cardiovascular and lung diseases hence epinephrine could not be used to treat the anaphylactic reaction. The postmortem toxicology report confirmed that the cause of death was anaphylactic shock secondary to alginate used during dental impression procedure [1]. Contact with polymeric impression materials for long period may lead to allergic contact dermatitis. Cutaneous allergic test carried out on few dentist and dental assistants working with these materials for long time revealed strong evidence of allergy [3]. Animal experiments have shown that these polymeric impression materials have high capacity for sensitization and also potent irritants [3]. Two cases of allergic reaction to silicon based impression material have also been reported [4]. The sensitization to silicon was caused either due to previous impression procedure or environmental exposure. Both the cases were confirmed by epicutaneous allergic testing [4].

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Polyether impression materials have been used in dentistry for over five decades. Although reports of allergic reaction to polyether surfaced in the 1970s it decreased after a change of a catalyst used by manufacturer. However, reports of allergic reaction to polyether impression material reemerged again recently. On this occasion the cause was traced to a component of the base paste [5].

These were a few very rare instances when allergic reactions have been observed for impression materials. However, since there is a constant improvement and innovation in impression materials coupled with the use of newer chemical agents the chances of allergic reactions to impression materials although rare can never be ruled out completely.

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