

Minimizing Aerosol Generation in Covid Era During Dental Practice

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Most routine dental treatments are aerosol-generating procedures that produce a mixture of splatter, droplets and aerosols that contain saliva, blood, irrigant water, and viable microorganisms (including bacteria and viruses). Commonly used dental instruments, including dental hand-pieces, air-water (triplex) syringes, and ultrasonic scalers generate a large volume of splatter and aerosols, that are derived from patient fluids and coolant water, and that pose a risk to dental professionals and patients¹. Dentist and the auxiliary staff should take all the possible measures to eliminate or minimize aerosol generation in the operator.

Extra-oral radiography or CBCT should be done instead of intra-oral radiography to avoid gag-reflex. Rubber dam must be applied during operative and rotary endodontic treatment. One should avoid using rotary instruments during cavity preparation. In selective cases, consider using chemo-mechanical caries removal or atraumatic restorative techniques. Hand and ultrasonic instrumentation are equally effective in removing plaque and calculus deposits; if required, manual scaling and polishing are recommended. Salivary suction must be performed with care to avoid gagging. Select and adjust trays to the right size for impression taking to avoid cough reflex. When performing simple extraction, treat the patient in a supine position to avoid working in the breath way of a patient. SAFE dentistry, SDF application, CMCR and ART should be followed in children to ensure minimal or no production of aerosols^{1,2,3}.

Dental aerosol-generating procedures produce a large number of splatters and aerosols; that creates a major concern for airborne disease transmission, such as COVID-19. One can opt for SAFER dentistry⁴ and opt for the above possible measures to run your practice during the covid era and prevent transmission of virus between the dentists, supporting staff and patients.

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