Deldent's Patented H.S.T. Polishing System

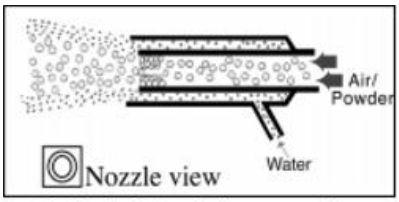

fig. 3 - Standard air polishng system. Separate nozzels result in a bi-phasic stream with hard particles in the centre and nozzle clogging.

Two airpolishing systems are currently available. One system, typically available on the Dentsply Prophyjet™ and Cavijet,™ the EMS Airflow, and the Satelec units, delivers the air and powder at 60-80 psi pressure through one nozzel and the water through a separate concentric nozzel. Some mixing of the streams takes place at the interface of the streams, but the centre of the stream consists essentially of dry powder. This "Biphasic" stream is directed at the tooth or implant surface [fig. 3]. Several studies have investigated this system, and its effects on implant surfaces, and conclude that this system can result in significant changes to the implant surface.

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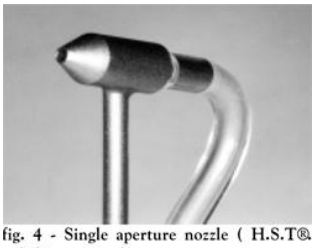
fig. 4 - Single aperture nozzle (H.S.T® polishing system)

In contrast, a more recently developed system by Deldent the patented H.S.T.® polishing system, premixes the water stream with the air and powder stream in a patented design spray head just prior to emission from the single nozzle [fig.4] This produces a single homogenous stream. This unique stream [fig. 5] results in softening of the surface of the powder particles. This feature, together with low (35 psi) pressure function of the unit, has been studied both in the USA and Europe, and has been shown to cause no damage to titanium implant surfaces or transmucosal elements, yet results in efficient plaque and stain removal.An analogy can be made between bombarding a surface with "golf balls" as in the first system described, or with "tennis balls"with a somewhat softer surface in the H.S.T polishing system [Fig. 6].

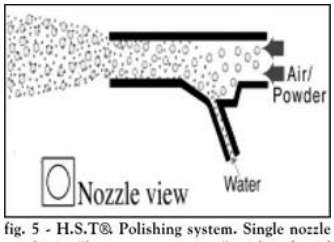

fig. 5 - H.S.T® Polishing system. Single nozzle results in "homogenous stream" with softened particles.

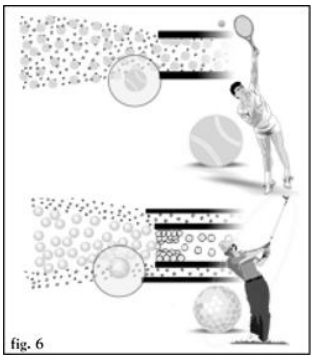
fig. 6