Management of aesthetic demands of qualitative enamel defects by a novel microinvasive treatment alternative

Richa Khanna
King George’s Medical University, India

Developmental defects of enamel (DDEs) are visible alterations in the normal translucency of enamel resulting from enamel organ dysfunction. Clinically DDEs can be seen as qualitative or quantitative defects. Qualitative developmental defects are further characterised by an intact surface layer which is smooth and hypermineralised, and a porous subsurface layer, that is soft and hypomineralised. Affected teeth pose significant clinical challenges due to this characteristic structure. The presence of such defects significantly increase dental treatment need as the teeth are more susceptible to plaque accumulation and dental caries. There is rapid post-eruptive tissue loss associated with the teeth and increased porosity of residual enamel.

Several treatment strategies have been suggested for DDEs, like micro abrasion, tooth bleaching, composite restorations, full crown restorations. Most of the treatment strategies that focus on aesthetic improvement, do not concentrate on the functional demands; like micro abrasion and bleaching. On the other hand, restorative procedures, which meet the functional demands, follow a much invasive protocol. In order to bridge the gap between the two have emerged the micro-invasive options. One of the most promising microinvasive alternative for DDEs is ‘resin Infiltration’. This new technique has been found to be highly effective in infiltrating natural early carious lesions which are structurally similar to qualitative developmental enamel defects.

The present series of clinical cases therefore were planned to assess how effectively resin infiltration procedure is able to recover the natural enamel esthetics.

Biography

Dr. Richa Khanna has completed her Bachelors of Dental Sciences in the year 2004 and Masters in Pedodontics in the year 2007 from the reputed King George’s Medical University, Lucknow (UP). She is presently working as Assistant Professor in the same speciality in her alma mater. She has a total of nine national and international publications to her credit since her joining in King George’s Medical University, Lucknow in 2009. She is also serving as member of review board of several reputed journals of India. She is a member of prestigious organisations like Indian dental association and Indian Society of Pedodontics and Preventive Dentistry.

richa.bahal@gmail.com

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