



## Recent Advances in Composite Resins

### Somasundaram P\*

Department of Conservative Dentistry & Endodontics, India

\*Corresponding author: Pavithra Somasundaram, Department of Conservative Dentistry & Endodontics, India, Tel: 919916353572; Email: pavithraendo@gmail.com

#### Editorial

Volume 8 Issue 1

Received Date: January 19, 2023

Published Date: January 31, 2023

DOI: 10.23880/oajds-16000361

### Editorial

Composite resins have long been the material of choice for Restorative Dentistry ever since their introduction by Dr. R. L. Bowen. There have been various modifications of the resin over the years. The major resin component being the same, modification in the fillers and their quantity have led to a number of variations.

Some of the advances are packable composites, flowable composites, self - adhesive composites, Bioactive composites, self - healing composite, plant based composites and fibre - reinforced composites.

Among the fibre reinforced composites, Ever X Posterior (GC Corporation), has been designed to be used as a dentin replacement in combination with Essentia (GC Corporation) as an enamel replacement. Ever X Posterior contains both barium glass fillers and silanated e-glass fibres. The short fibres of Ever X Posterior makes it a perfect sub structure to reinforce any large composite restoration. These fibres also prevent and stop crack propagation through the restoration which is considered to be the main cause of failure of composite restorations. They increase the adhesion to the overlying composite by providing added mechanical retention. During manipulation and

placement of the composite, the fibres orient themselves in a horizontal direction to give a structure that looks like a mass of overlapping "X" s. This minimizes shrinkage in the horizontal plane. Ever X Posterior also changes the fracture pattern of endodontically treated teeth by deflecting it away from the roots.

Essentia exhibits chameleon effect and is based on a mix of pre - polymerised and ultra - fine fillers. It is available in three viscosities.

Essentia Universal has a packable consistency with a combination of pre - polymerized and ultra-fine fillers. Essentia HiFlo has barium glass fillers in the range of 700 nm and has a fluid viscosity with high wettability and adaptation characteristics. Essentia LoFlo incorporates 200 nm ultra - fine strontium fillers and is an injectable composite with low flowability and ideal when a thixotropic material is needed. This material is available as unit dose compules.

G-aenial A'CHORD is a restorative composite with Full - Coverage Silane Coating (FSC) and High Performance Pulverised CERASMART (HPC) technologies and exhibits natural fluorescence under all lighting conditions.

