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## Clinical evaluation of in-office tooth bleaching effects on three contemporary composites resin

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**Objectives:** To evaluate and compare the clinical performance of three contemporary nano composites resin restoration as anterior restoration in class IV cavities in maxillary anterior teeth over one year after bleaching follow up period.

**Materials & Methods:** A total of 12 subjects (30 restorations), 18-38 year old with class IV carious upper anterior teeth were included, divided into three groups. Each group (n=10 restorations) was randomly restored with the same restoration material type; Beautifil II nano-hybrid composite resin (Shofu Dental Corporation, USA), IPS Empress Direct a nano-hybrid composite resin (Ivoclar Vivodent, USA), and the nano-ceramic micro-hybrid composite resin; Ceram-x-mono (DeTrey, Dentsply, Germany). They were restored according to the manufacturer's instructions. Clinical evaluation was conducted before bleaching (baseline) and two days, three months, six months, and one year after bleaching for retention, recurrent caries, marginal integrity, marginal discoloration, surface texture, color match, and anatomic form. The A and B scores were considered clinically acceptable while C and D scores were considered clinically unacceptable. The data was subjected to statistical analysis using Chi-squared test (X<sup>2</sup>) and ANOVA.

**Results:** All materials were considered clinically acceptable as anterior dental restoration. The survival rate was 100% between the Ceram-x-mono and Beautifil II materials in the clinical performance at six-months and one year (P=0.00) whereas ISP Empress Direct was inferior in anatomical form, color match, and marginal discoloration integrity.

**Conclusion:** It was concluded that three-tested dental restoration is considered clinically acceptable as anterior restoration. Therefore, the use and the long term effects of bleaching on ISP Empress Direct should be carefully considered.

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