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**Title:** The effect of different sodium hypochlorite concentrations on the microleakage of cervical composite restorations

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**presenter:** Pardis Tarighi

**Abstract:**

**Introduction:** Hybrid layer might be necessary for a durable bond and less microleakage but it is susceptible to degradation. This study investigates the effect of removing hybrid layer with a proteolytic substance (sodium hypochlorite) in different concentrations on the microleakage of cervical restorations with an etch-and-rinse and self-etch adhesive.

**Method:** 100 cavities were prepared in 50 extracted premolars in buccal and lingual with the gingival margin placed in dentin. The occlusal margins were beveled and specimens were randomly distributed to 10 groups. In the first five groups Single Bond adhesive was used after etching and rinsing either alone or after application of 2ml sodium hypochlorite in 0.5, 2, 5 and 10% concentrations (groups 2-5). In the other 5 groups same procedures were done with Scotch Bond MP. All groups were restored with Z100, polished and thermocycled. Surfaces were covered with nail polish except the restoration and put in 50% silver nitrate. A longitudinal section was prepared from each tooth and microleakage was investigated. Statistical analysis was performed using Kruskal-Wallis and Mann-Whitney. (P=0.05)

**Result:** more microleakage was seen in gingival margins than in occlusal in all groups. There were no significant difference in microleakage with different NaOCl concentrations compared to the control group for either of the adhesives. Microleakage results in gingival margins were better for Single Bond than Scotch Bond MP.

**Conclusion:** for each of these two adhesives studied concentrations of NaOCl did not have any decreasing or increasing effect on microleakage. Further investigation is suggested.

**Hybrid layer- sodium hypochlorite- microleakage- cervical composite restoration**

**Presentation:** Oral