ABSTRACT

AIM:
To measure and compare bracket transfer accuracy of five indirect bonding (IDB) techniques.

MATERIALS AND METHODS:
Five groups were studied. In each group 10 working models and 10 study models are taken.
Group I – PolyVinyl Siloxane (PVS – Putty)
Group II – Single Vacuum Form (Single-VF)
Group III – Clear Polyvinyl Siloxane (PVS -Clear)
Group IV - Double Vacuum Form - Double VF
Group V – Polyvinyl Siloxane (Clear) Vacuum form (PVS-VF)

Brackets were bonded on 50 identical stone working models (10 per technique). IDB trays were fabricated to transfer brackets to another 50 identical stone study models (10 per technique). The MesioDistal (M-D: x-axis), OcclusoGingival (O-G: y-axis), and BuccoLingual (B-L: z-axis) positions of each bracket are measured using the Photographic and Caliper measurements.

RESULTS:
When the techniques were compared, bracket transfer accuracy was similar for PVS-VF, PVS-Clear, and PVS putty, whereas Double-VF showed significantly less accuracy in the O-G direction. Single VF was less accurate in all three directions (M-D, O-G & B-L).

CONCLUSION:
Based on the findings of the present study, overall differences in bracket position were relatively small. Silicone-based trays had consistently high accuracy in transferring brackets, whereas methods that exclusively used vacuum-formed trays were less consistent.