



▼ POST GRADUATES ABSTRACTS

PG - 63 : EVALUATION OF FRICTIONAL ANALYSIS IN DIFFERENT SELF-LIGATING BRACKET SYSTEMS AND CONVENTIONAL BRACKET SYSTEMS -AN INVITRO STUDY

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Aim: To evaluate the kinetic frictional resistance in conventional bracket and passive Self ligating bracket system by passing 19x25 SS rectangular wire in wet and dry conditions.

Materials and Methods: conventional brackets such as Metal bracket, Ceramic brackets and Synergy brackets and Self ligating brackets such as Smart clip, Empower and Damon Q brackets were procured 36 each. 19x25 SS rectangular straight length wire were passed through the brackets and frictional characteristics were evaluated in Instron universal testing machine for both wet and dry conditions.

Results: The results obtained for Group A1 when evaluated for frictional characteristics in dry medium were 4.99N and in wet condition was 5.83N. For Group A2 values in dry medium was 5.83N and in wet

condition was 8.24N. values obtained for Group A3 in dry condition was 4.75N and values in wet condition was 5.82N. Group B1 values in dry medium obtained was 4.41N and values in wet condition was 5.16N. For Group B2 frictional characteristics in dry medium was 3.49N and in wet condition was 4.24N. Group B3 when evaluated for frictional characteristics in dry medium exhibited frictional values of 1.46N and in wet condition which is 2.34N.

Conclusion: Damon Q showed least frictional characteristics followed by Empower Self ligating bracket, then Smart clip self ligating bracket followed by Synergy brackets, Metal brackets, ceramic brackets in both wet and dry conditions. Synergy even though a conventional bracket, exhibited superior frictional characteristics when compared with other conventional brackets in both wet and dry conditions