

Maxillary constriction whether unilateral or bilateral still one of the most important problem in orthodontics thus aim of this article to test hypothesis that Maxillary expansion may be combined with or without retainers for complete treatment due to expansion treatment taken a couple of months while the expander was not removed for several more months to keep teeth from relapse. Twenty patients with an age ranged between 17-22 years old, had posterior bilateral buccal cross bite 5 mm or less based on Angle' classification malocclusion were selected in this study. All of them were white Iraqi Arab in origin and had full permanent dentition regardless the wisdom teeth with minimal crowding (1-2mm). Sample classified in to two groups (A) and (B) of 10 patient and study model was taking preoperatively, after 4 month and after 12 month respectively. Transpalatal bar constructed and cemented at the same time of hyrax removal, this is procedure prepared for group (B), while for group (A) Hyrax removed and just take impression without TPB and at that time sequence of main arch wire continue and all cases finished with 019*025 mil Nickel Titanium arch wire. Inter-cuspal premolar distance showed significant relapse (1.79 mm) occurred in none retention group (A) between 4 and 12 month this is not present in retention group(B) amount of relapse was none significant (0.05). While there was significant difference in inter-cuspal molar group A equaled to (1.48mm) and group B equaled to (1.38). Analysis of relapse in group A and group B clarifying that the use of Trans-Palatal arch as retention after hyrax expander didn't increasedento-alveolar stability.