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## Accuracy of cast posts fabricated by the direct and the indirect techniques

Roa'a A Aldossari, Mohammad R Rayyan, Sarah F Alsadun and Fatimah R Hijazy  
Riyadh Colleges of Dentistry and Pharmacy, Saudi Arabia

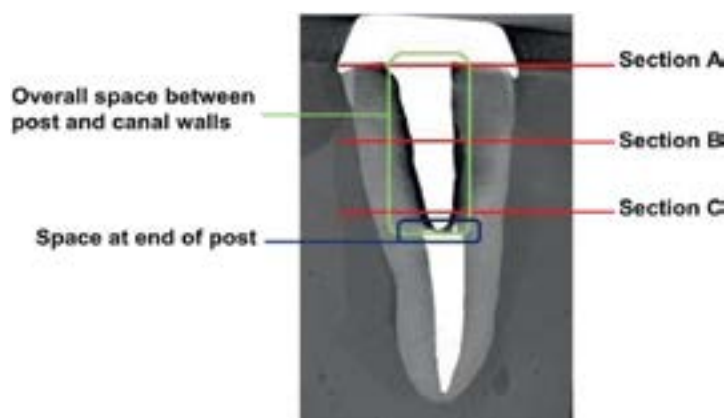
**Statement of Problem:** Patterns for custom cast posts and cores can be fabricated either by the direct or the indirect technique, which technique is more accurate is unknown.

**Purpose:** The purpose of this in vitro study was to investigate the effect of pattern fabrication technique on the accuracy of post fit.

**Materials & Methods:** Ten intact extracted premolar teeth with a single canal and similar dimensions received root canal treatment. The teeth were sectioned 2 mm above the cemento-enamel junction. A total of 20 cast post and core patterns, 2 for each tooth, were fabricated, 10 with the direct technique and 10 with the indirect technique. Patterns were cast to produce 20 cast post and cores. Each tooth was scanned using a microcomputed tomography (mCT) system with a resolution of 14.5 mm, once with the post of the direct technique and once with the post of the indirect technique. Ct analyzer software was used to calculate the overall space between the post and canal walls and the space areas in 3 different standardized sections. The Student paired test was used to determine any significant difference in the scores of the groups.

**Results:** The overall space between the canal walls and posts made with the direct technique ranged between 7.86 and 17.39 mm<sup>3</sup>, with a mean value of 12.25 mm<sup>3</sup>, whereas with the indirect technique, the space ranged between 6.68 and 18.02 mm<sup>3</sup>, with a mean of 11.92 mm<sup>3</sup>. No significant differences were found between the results of either technique ( $P > .05$ ).

**Conclusion:** Within the limitations of this study, neither the indirect nor direct pattern fabrication technique influenced the accuracy of post fitting.



### Recent Publications:

- 1- The Journal of Prosthetic Dentistry 2016.

### Biography

Roa'a A Aldossari is an Assistant Professor in Prosthodontic Department, College of Dentistry, Riyadh Colleges of Dentistry and Pharmacy, Riyadh, Saudi Arabia.

dr.dossari.r@gmail.com