

The background image shows a close-up of a dental procedure. A scalpel is being used to make an incision in the gingival tissue of a tooth. The tooth is light-colored, and the gingiva is pink. The scalpel blade is visible, with the number '11A12' printed on it. The text is overlaid on the image.

A Novel Approach for Split-thickness Flap Reflection in Mucogingival Surgery

Technical Report of the Parallel Incision Design

Panos Afouxenides DDS, MSc, Ryan Noh DDS, MS
Graduate Periodontics
Texas A&M, School of Dentistry



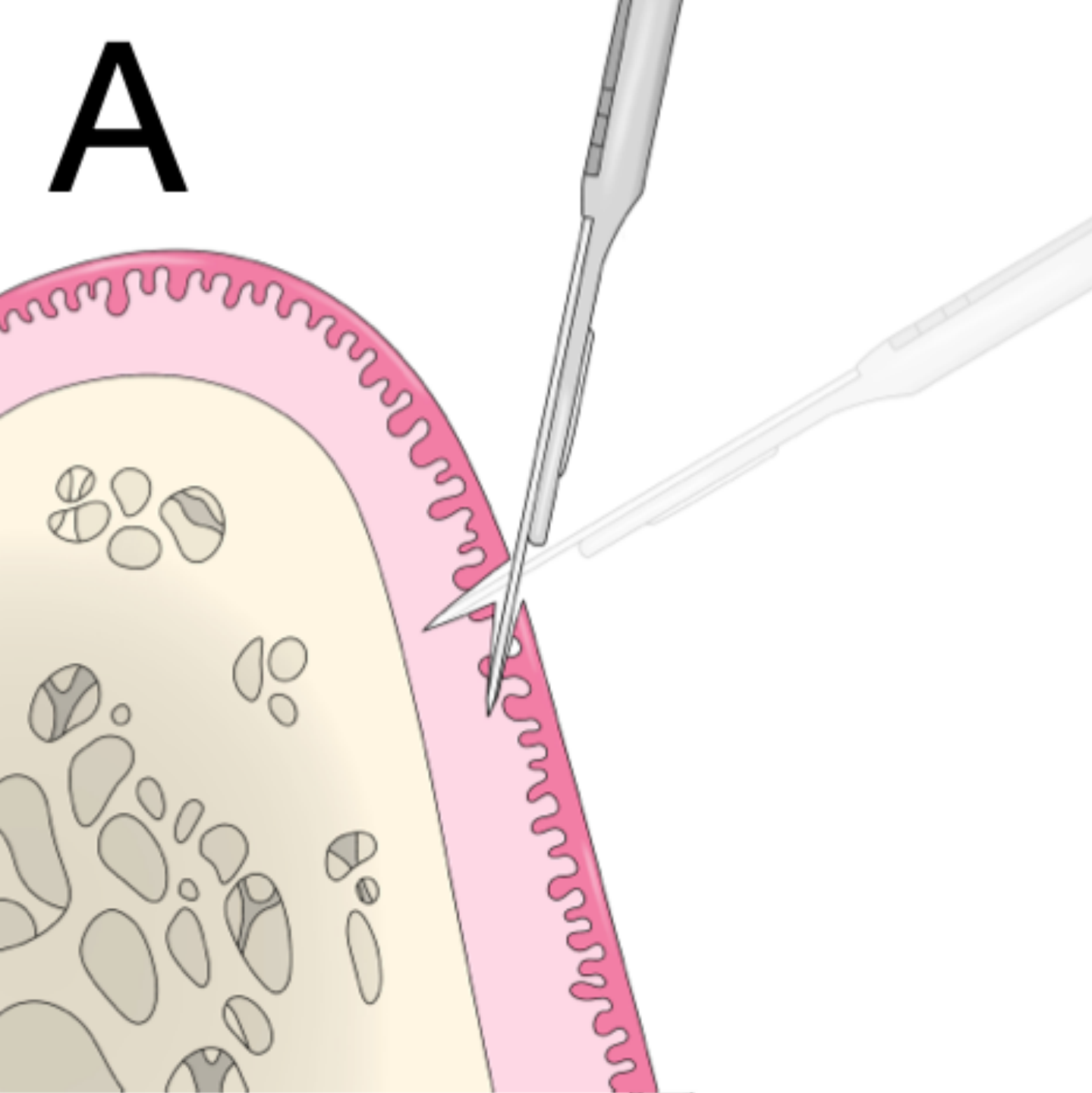
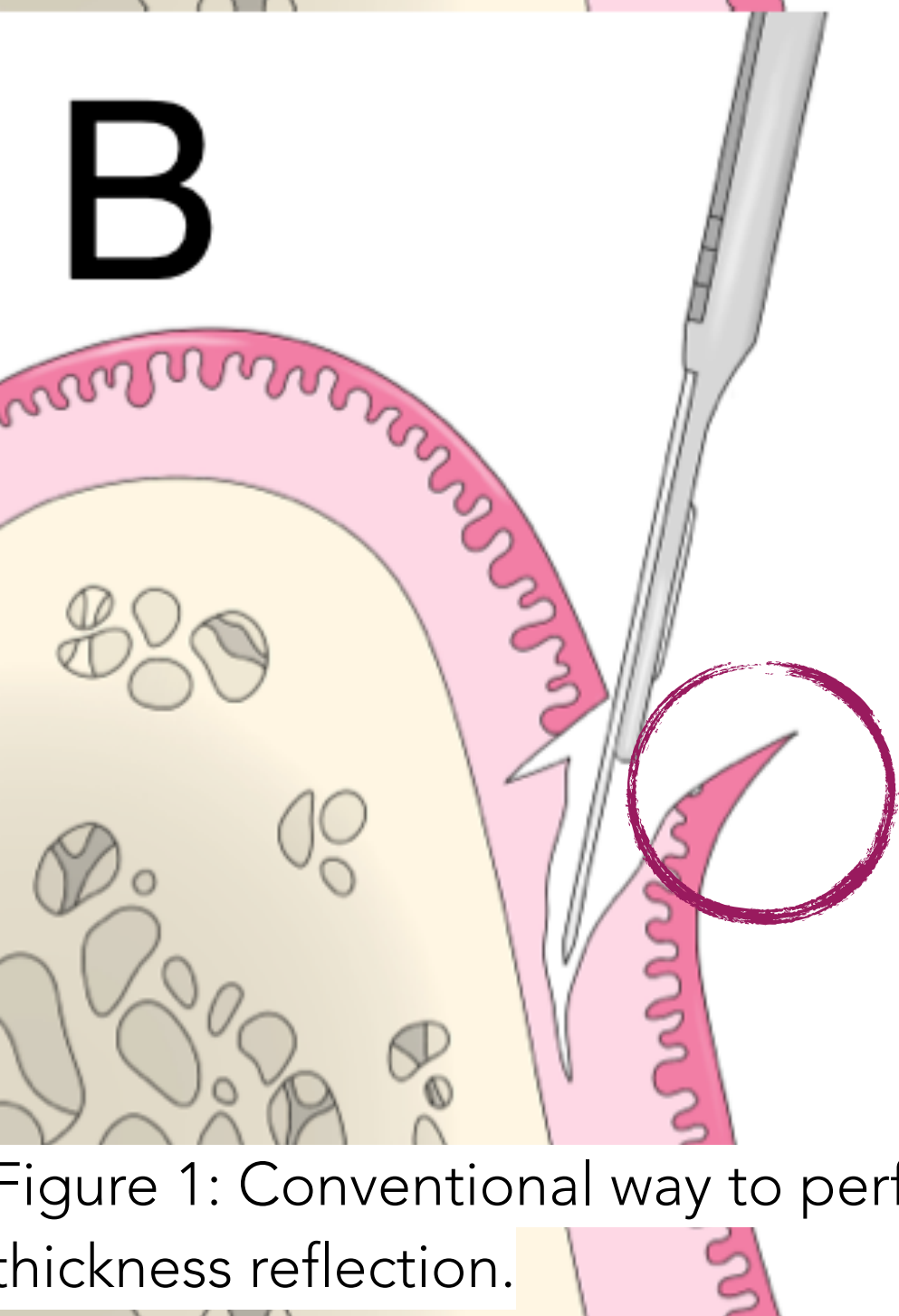


Figure 1: Conventional way to perform split thickness reflection.



Figure 2: Local tooth and gingival anatomy may hinder blade access.

Partial thickness reflection optimizes wound healing, and provides a connective tissue bed to anchor the graft. However, it is a technique sensitive step. Thinning the papillae excessively or perforating the tissues can be detrimental to the outcome, and therefore, the surgeon needs to exercise caution when performing this step (Fig. 1). Local anatomy can make make this process more challenging (Fig. 2).

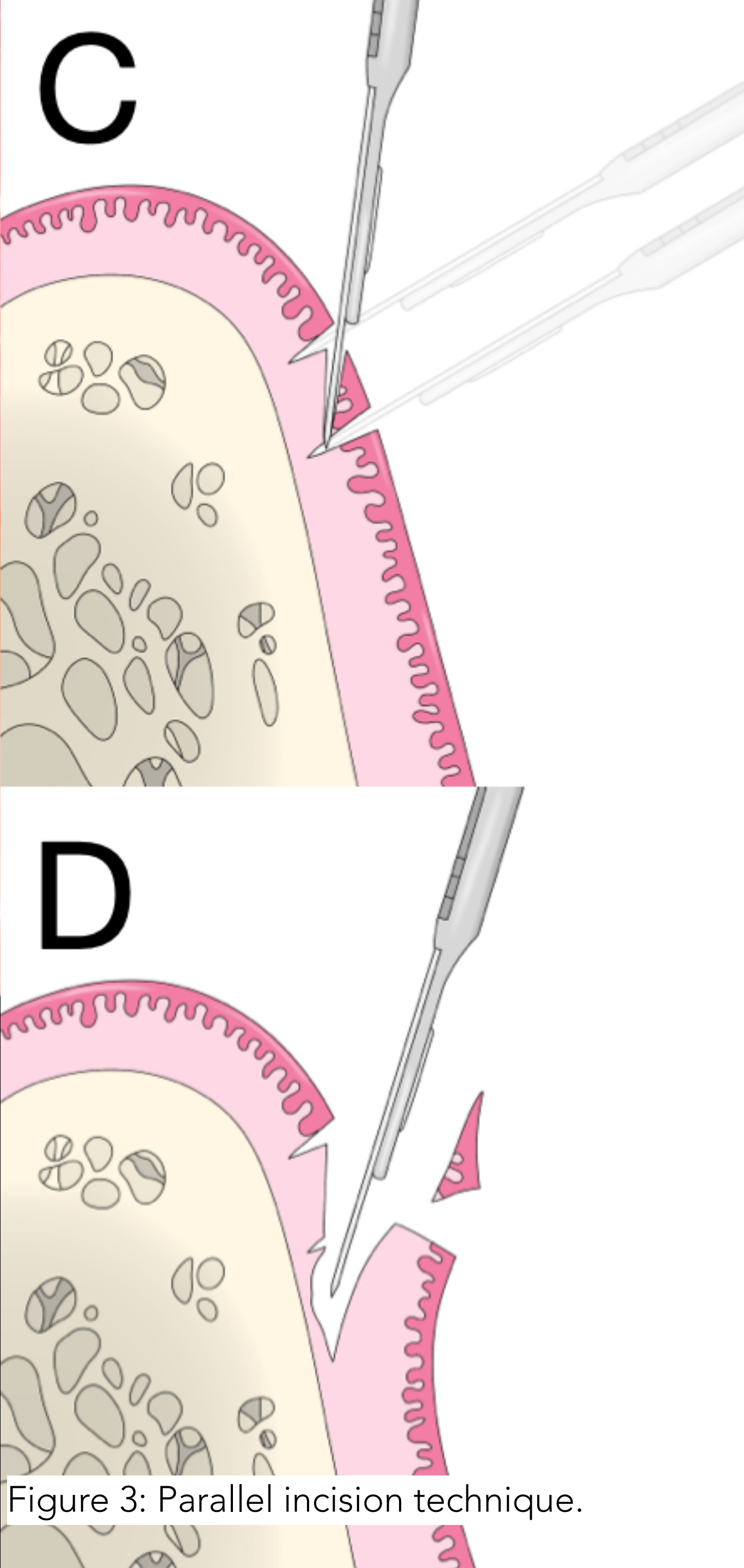
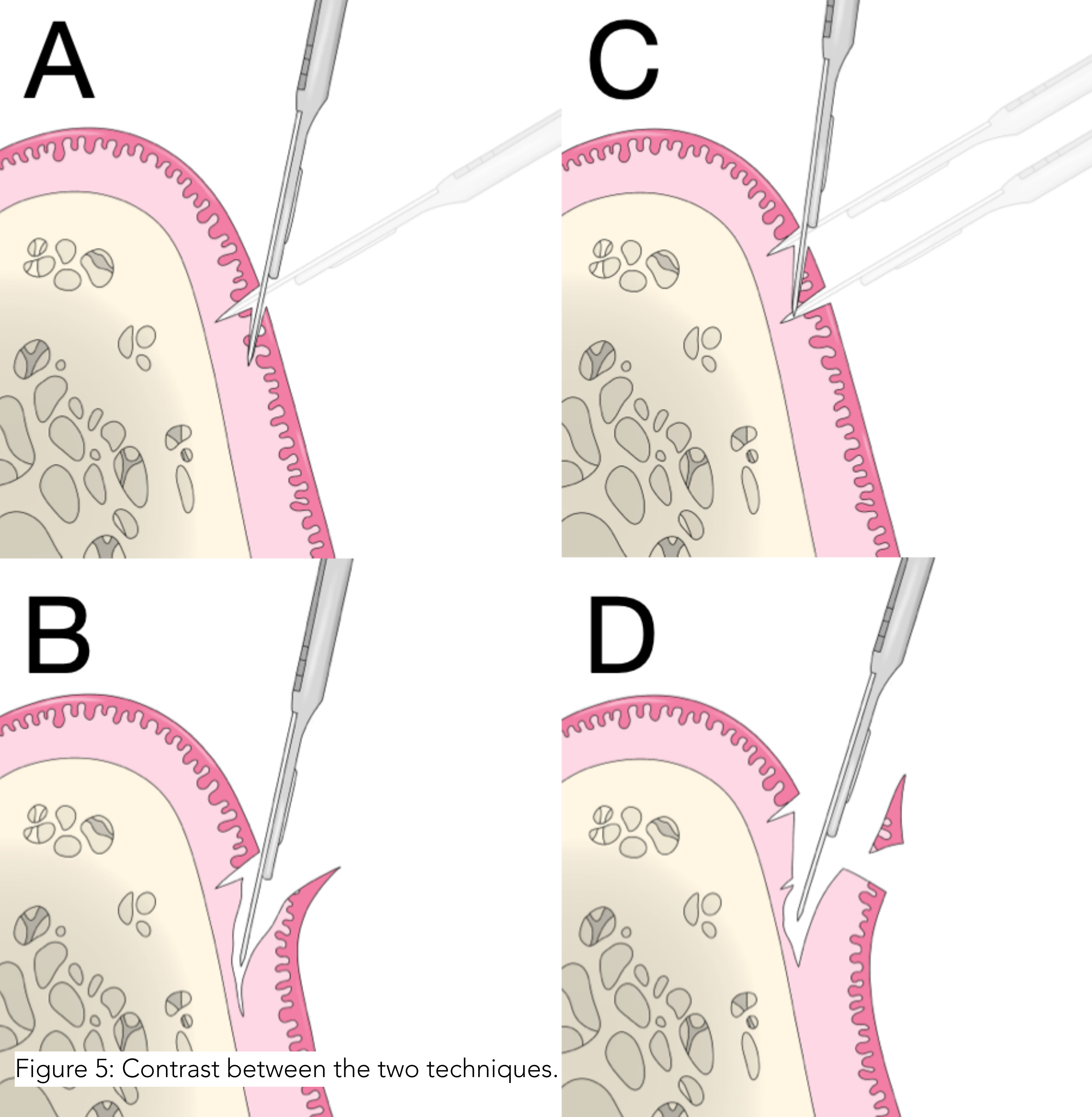


Figure 3: Parallel incision technique.



Figure 4: Parallel incision design.

Two parallel submarginal incisions perpendicular to the soft tissues are performed, based on the classic Zucchelli, De Sanctis technique (Fig. 4).

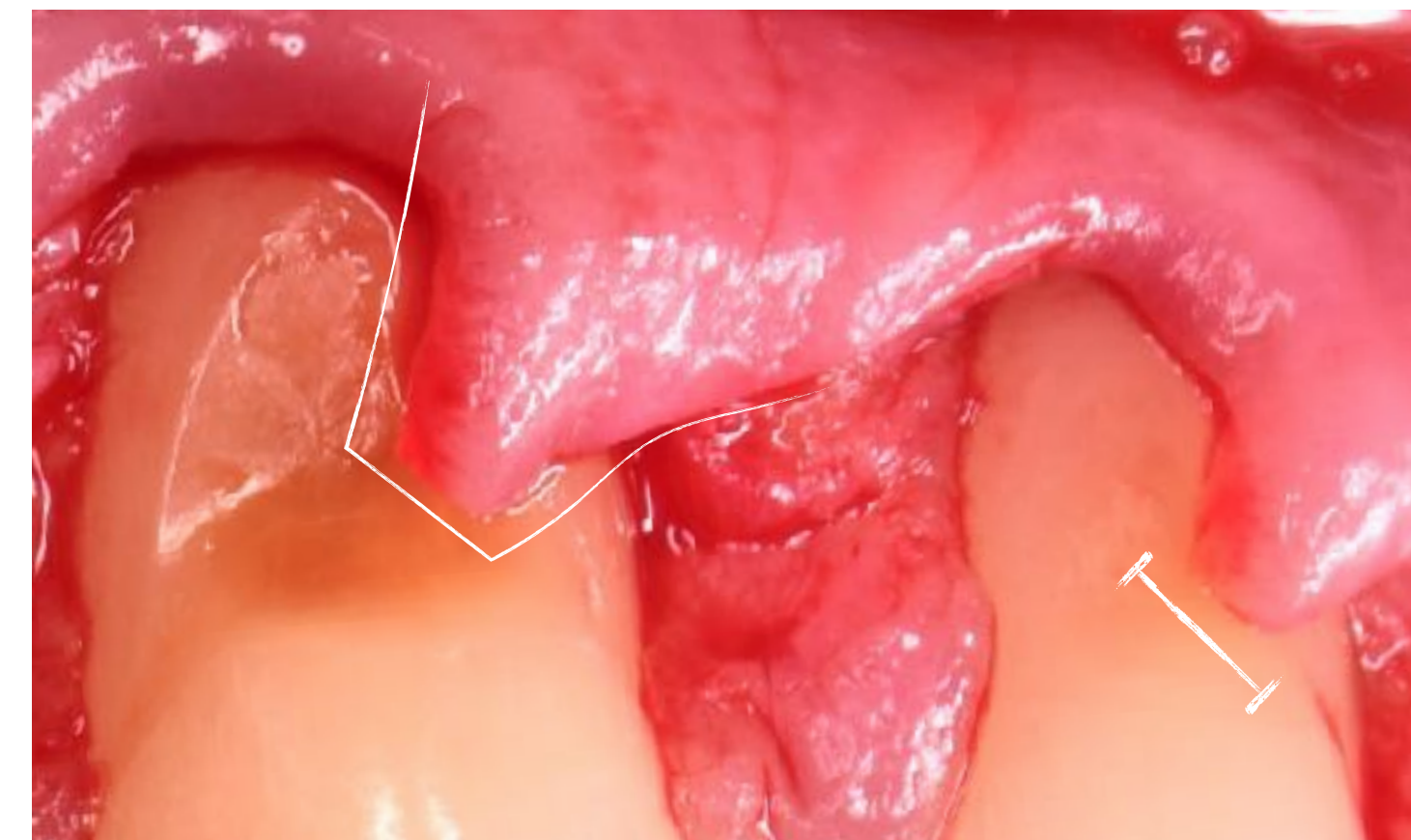


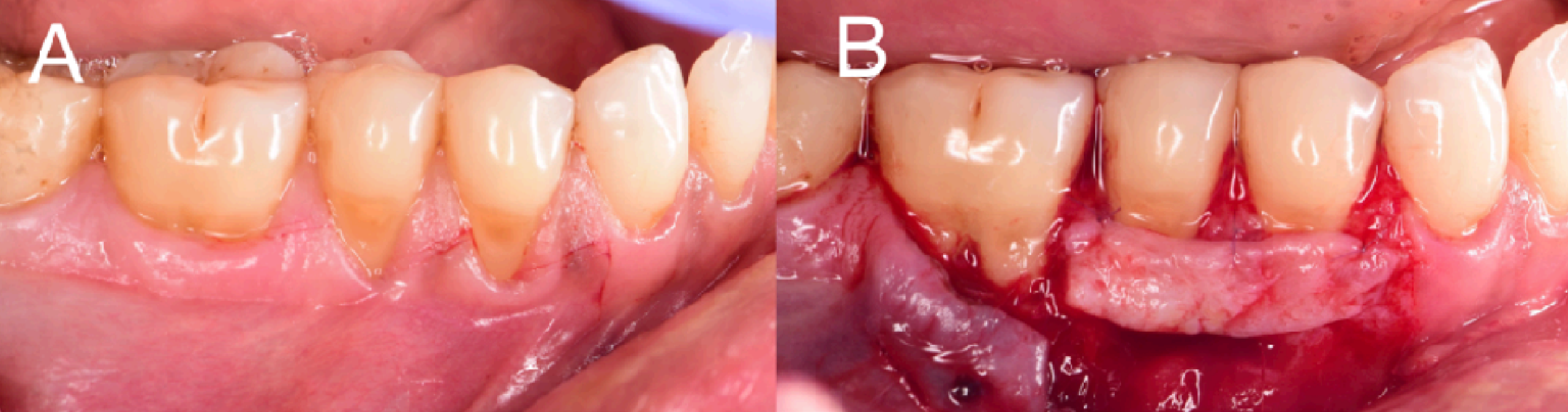
Resulting flaps are at the same level, and have the same length, but the flap prepared in the conventional way is much thinner (A-B) in the coronal portion which may result in flap margin necrosis.

Figure 6: Split thickness reflection starts from the coronal incision.



Figure 7: Resulting flap margins have adequate, and uniform thickness.





Figures 8, 9 (Cases): Two parallel submarginal incisions perpendicular to the soft tissues are performed. Split-thickness reflection of the papilla starting from the coronal incision provides a more uniform, square, flap margin as the anatomical papilla is de-epithelialized.

A: parallel incision, B: Graft anchorage, C: Closure, D: 2-week postop

The parallel incision technique is a novel technique that facilitates quick, easy, and predictable partial thickness flap reflection of the papillary area



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