

Standardized Suture Tail Cutting Technique for Enhanced Cosmesis in Epidermal Closure

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To the Editor,

We describe the use of the cotton-tipped applicator method to standardize suture tail length in both interrupted and running epidermal closures, producing consistent 3 to 4 mm tail lengths to enhance scar cosmesis while preserving knot integrity. Beyond functional healing, suture tail length and knot appearance influence cosmetic appearance and patients' perceptions of care, healing, and overall outcomes.¹ Suture tail length is an important indicator of knot integrity, with optimal tail length between 3 and 10 mm.² Insufficient tail lengths can result in knot failure, leading to surgical complications such as dehiscence, wound separation, and splayed scar formation. Excessively long suture tails can result in irritation to surrounding skin, suture tangling, and concerns of non-uniform appearance.³ For patients, the visual appearance of their suture knots and tail length are among the most immediate and visible indicators of closure quality. Attention to this detail enhances cosmesis outcomes and patient satisfaction.

To our knowledge, this is the first report describing the cotton-tipped applicator method in both interrupted and running epidermal closures as a simple, reproducible approach to improving cosmesis.

Clinical Challenge

Currently, there is no standardized method to achieve consistent suture tail length without measuring each tail individually, making it difficult for trainees and assistants to achieve uniform results. Our goal is to propose a standardized method to improve cosmesis and ensure aesthetic wound closure for running and interrupted sutures.

The Cotton-Tipped Applicator Method

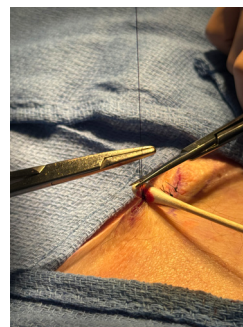
The use of a standard-sized cotton-tipped applicator (approximately 3-mm head diameter) can be used as a guiding aid for surgical staff in providing uniform epidermal suture tail lengths for optimal cosmesis.

Required materials include a sterile, standard-sized cotton-tipped applicator (approximately 3-mm head diameter) and suture scissors.

Step-by-step Technique: The cotton-tipped applicator method for running and interrupted sutures allows for the attainment of standardized suture (3-4 mm) length and consistent visual suture appearance for patients receiving percutaneous sutures.

1. Once the suture knot has been tied, the cotton-tipped applicator is placed directly on top of the knot, with the wooden end of the applicator perpendicular to the line of the incision (Figure 1).

FIGURE 1. Demonstration of the cotton-tipped applicator to achieve a 3-mm suture tail.



2. The suture scissors are placed directly on top of the head of the cotton-tipped applicator, and the suture is cut, leaving a tail with a length of approximately 3 mm (Figure 2).

FIGURE 2. Uniformly cut interrupted sutures with 3-4 mm tails.



The cotton-tipped applicator method for running and interrupted sutures standardizes epidermal suture knot length, thereby both

enhancing post-operative cosmesis and ensuring adequate knot integrity. Maintaining 3 to 4 mm tail lengths helps to prevent knot failure due to insufficient suture ends, which can lead to wound dehiscence. Conversely, standardizing suture tail lengths can prevent irritation and discomfort due to excessive suture tail length. Finally, many patients consider the appearance of their epidermal sutures as an indicator of cosmetic outcome.^{4,5}

Consistent, uniform suture tails create a more polished aesthetic that patients notice immediately, reinforcing the quality and cosmetic finish of the repair. This simple, inexpensive technique ensures knot integrity, enhances wound closure appearance, improves patient satisfaction with immediate aesthetic outcomes, and provides an easily teachable, standardized method to optimize epidermal closure for both physicians and patients.

DISCLOSURES

The authors have no conflicts of interest to disclose.

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