



Demonstrating the cotton-tipped applicator method to standardize dermatologic surgery suture tail length

Rebecca Leibowitz, BS,^a Jordan Lim, MD,^b and Travis W. Blalock, MD^b
Atlanta, Georgia

Key words: Mohs micrographic surgery; surgical dermatology; suture management.

CLINICAL CHALLENGE

Suture end length is an important indicator of knot integrity. Knots with an end length between 3 and 10 mm are less likely to come unraveled than knots with an end length of <3 mm.¹ It is important, however, to cut the sutures short enough to prevent the ends from entangling. This can be achieved by cutting the sutures to a length that is less than the distance between sutures.² For new learners and surgical assistants, measuring each knot end length before cutting is time consuming and laborious. Thus, this standardized method could be used to help teach and replicate appropriate suture tail length. Equipment that is needed includes a sterile, standardized cotton-tipped applicator (approximately with 3-mm head diameter) and suture scissors.

SOLUTION

In this video tutorial ([Video 1](#), available on www.jaad.org), we demonstrate a suture cutting technique known as the cotton-tipped applicator method. This technique allows for consistent suture end length and improved knot integrity when using interrupted 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. For purposes of antisepsis, the applicator should not come into contact with any surface that would compromise the sterile or clean procedure.
2. The suture scissors are placed directly on top of the head of the applicator and the suture is cut, leaving a tail with a length of approximately 3 mm ([Fig 1](#)).
3. These steps are repeated for each knot to achieve consistent, uniform, and effective percutaneous suturing.

From the Emory University School of Medicine, Atlanta^a; and Department of Dermatology, Emory University School of Medicine, Atlanta.^b

Funding sources: None.

IRB approval status: Not applicable.

Correspondence to: Rebecca Leibowitz, BS, Emory University School of Medicine, 201 Dowman Drive, Atlanta, GA 30322.
E-mail: Rebecca.leibowitz@emory.edu.

JAAD Int 2022;7:131-2.

2666-3287

© 2022 by the American Academy of Dermatology, Inc. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

<https://doi.org/10.1016/j.jdin.2022.03.003>

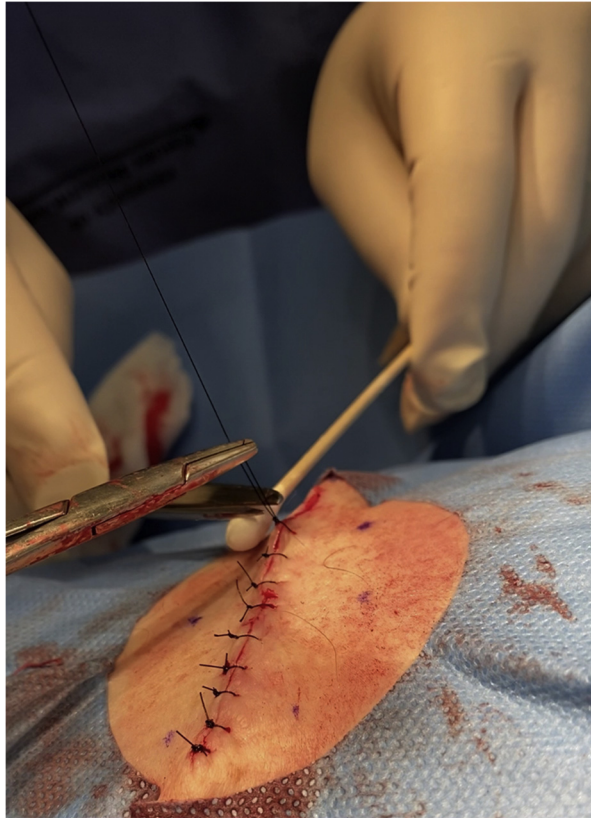


Fig 1. Steps 1 and 2 of the cotton-tipped applicator method. The cotton-tipped applicator is placed perpendicular to the line of incision, with the suture scissors located directly superior to the applicator.

Conflicts of interest

None disclosed.

REFERENCES

1. Muffly TM, Cook C, Distasio J, Bonham AJ, Blandon RE. Suture end length as a function of knot integrity. *J Surg Educ.* 2009;66(5):276-280. <https://doi.org/10.1016/j.jsurg.2009.10.003>
2. Lammers RL, Scrimshaw LE. Methods of wound closure. In: Roberts JR, Custalow CB, Thomsen TW, eds. *Clinical Procedures in Emergency Medicine.* 7th ed. Elsevier; 2019:655.