Short Communication

External Knot for Running Intradermal Stitch

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Abstract

We describe a unique method for closure of running subcuticular/intradermal suture that minimizes potential abscess formation and maximizes cosmetic outcomes.

Keywords: Surgery, suture, technique

Introduction

The standard technique for subcuticular/intradermal suturing entails placement of a buried knot at the distal apex of an incision, running the suture material with subcuticular/intradermal bites to the proximal apex where an additional buried knot is made, pulling the needle and suture material through the adjacent skin, and finally cutting it flush with the epidermis.[1]

Though this method is functionally reliable, there are several potential problems. One is that the buried knots are prone to abscess formation.[2] In addition, the bulk associated with the buried knots can leave a "dog-ear" appearance to the wound apices.[3]

Therefore, we present a technique in which the incision is closed without a buried knot mitigating the potential for abscess formation in addition to the cosmetically unappealing bulk at wound edges associated with standard subcuticular closure.

Report

The technique is articulated and shown in Figure 1 and Video 1. A standard intradermal bite at the distal apex is made leaving a long tail. Subsequent running intradermal bites are made from the distal to the proximal apex. When the proximal apex is reached, the needle and suture is brought out through the adjacent skin at a 90° angle. The suture is

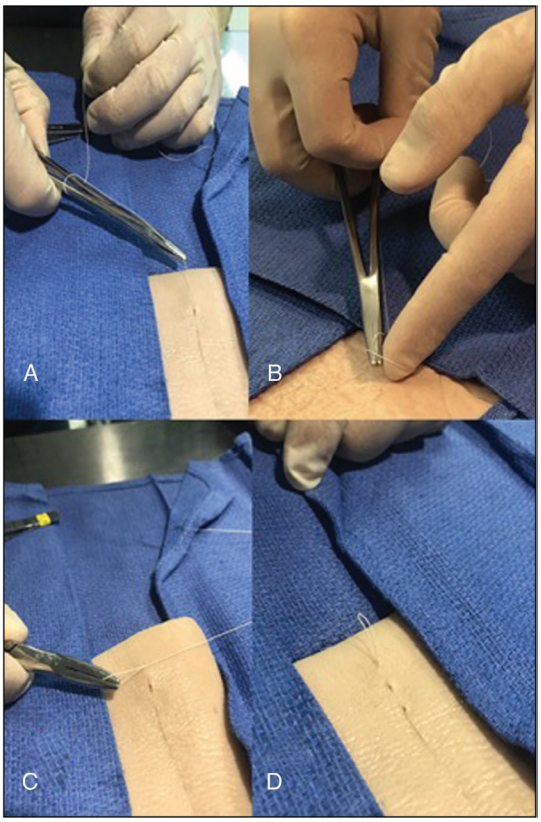

Figure 1: (A–D) Steps for securing intradermal suture with external knot

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wrapped around the shaft of the needle driver. Using the needle driver, the suture is then grasped approximately 1 cm from the skin [Figure 1A] Next, using the free, contralateral hand, the loop around the shaft is flipped over the jaws of the needle driver to create a knot with a loop [Figure 1B]. Attention is made to leave a slight air knot while securing the knot approximately 1 cm above the skin. Additional throws are made using standard simple suture technique [Figure 1C]. After six total throws, the free end is cut [Figure 1D].

Conclusion

We have seen outstanding functional and aesthetic results with this method. This technique is simple and reliable. It provides durability that is comparable to that with buried knots. Having the knot external mitigates the risk associated with granuloma and abscess formation posed by buried knots with the standard technique.[4-7] Moreover, this technique maximizes cosmetic outcomes as the external knot minimizes the bulky, "dog-ear" appearance at the proximal apex commonly associated with the more common method of securement.[7,8]

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Conflicts of interest

There are no conflicts of interest.

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