

Using Hypodermic Needle as Suture Needle in Emergency

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Abstract

Sometimes, suture thread detaches from needle while suturing. This leads to wastage of left over thread and we have to repeat whole process of suturing as the extra suture needles are not easily available. The present article highlights the use of hypodermic needle as suture needle in such emergencies.

Keywords: Hypodermic needle, dermatosurgery, suturing, emergency, innovation, make shift

SURGICAL CHALLENGE

Most of suture materials available in market are with swaged needle. The swaged needle is supposed to be less traumatic. Unfortunately, sometimes the suture thread detaches from the needle or even breaks, particularly when suturing is carried out on physiologically thick skin such as feet and upper back or pathologically hyperkeratotic, acanthotic, or fibrosed skin. Moreover, extra suture needles (with eye) of appropriate sizes are not easily available. This leads to repetition of whole of suturing process in continuous suturing or wastage of suture thread in interrupted suturing.^[1]

SOLUTION

This problem can be overcome by using a hypodermic needle as suture needle. Use of hypodermic needle as suture needle has already been described,^[2] in which the author suggested breaking the needle from the plastic hub followed by passing a suture thread of desirable size through the broken end. The needle was then curved into a half-circle using two needle holders. The proximal end of the needle was compressed to secure the suture thread. However, the said method had several limitations. There are chances of injury to the surgeon while separating needle from the hub; the suture thread may not be passed easily from the proximal end as the lumen may get obliterated while separation; or there are also chances of slippage of thread due to improper grip. Moreover, there can be fracture, bending, or blunting of the

needle while suturing as the needle may get weakened because of repeated compressions to secure the suture thread. To overcome these limitations, we recommend using an intact hypodermic needle after gently curving it with a sterile artery forceps or needle holder. The needle is then passed through the wound edges [Figure 1A] followed by passing of desired suture thread through any end of the needle. The suture is then taken out from the other end of needle and knot is tied after withdrawing the needle [Figures 1–3]. The gauge of hypodermic needle is chosen according to site of the wound as the different monofilament suture threads, for example, number 0, 2-0, 3-0, 4-0, 5-0 can pass through hypodermic needles of 21, 22, 23, 24, and 26 G, respectively.

Therefore, this modification eliminates the risk of injury to doctor during separation of needle and to the patient from irregularly broken end of the needle. It further prevents slippage of suture thread from needle, thus ensuring better operational grip. The suture thread can be easily passed through any of the needle ends. In addition, this modification enables us to change the needle mid procedure in case of fracture, bending, or blunting of the needle.

This technique is very simple, economical, prevents wastage of leftover suture thread, and does not need any

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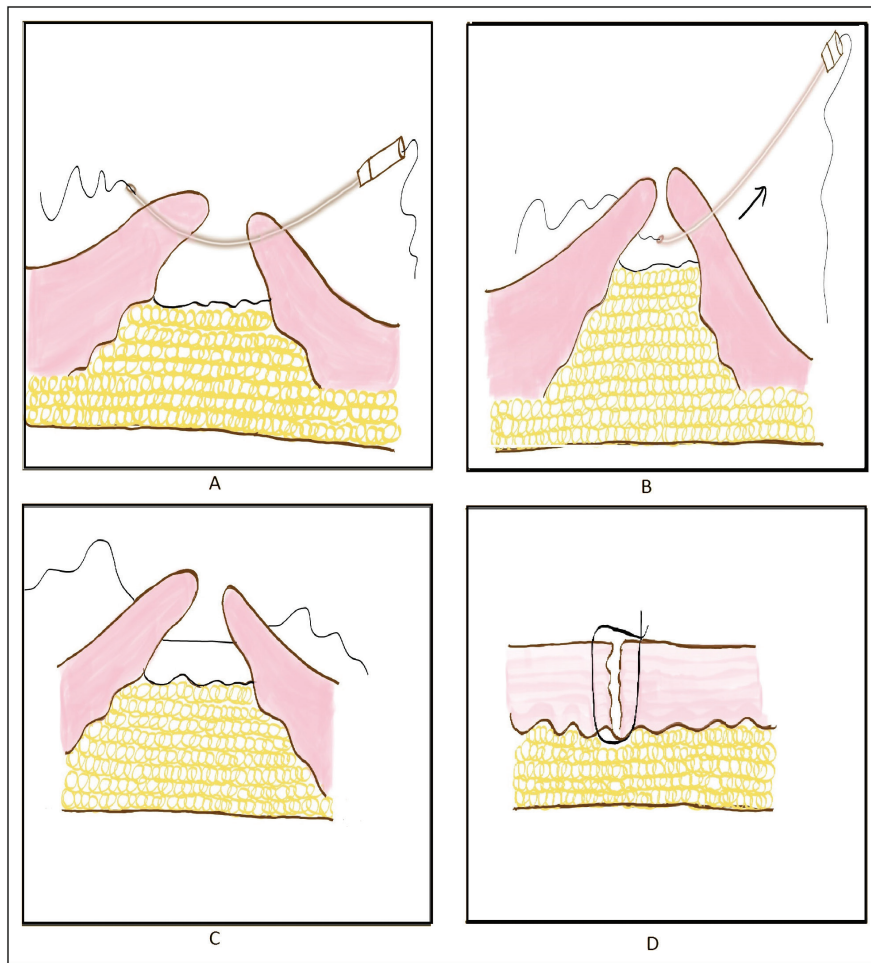


Figure 1: Sketch diagram showing various steps: (A) hypodermic needle (22 G) passed through wound edges and suture (prolene 3-0) being passed in needle for suturing, (B) hypodermic needle being taken out, (C) suture thread being secured, and (D) suture knot being tied



Figure 2: Hypodermic needle (22 G) passed through wound edges



Figure 3: Hypodermic needle being withdrawn after passing suture thread

expertise. It is also a good option in cases of emergencies and a low-budget setup.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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