

Securing Subcuticular Absorbable Suture With Buried Knots

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Citation

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Abstract

Many methods have been described to secure the subcuticular sutures to close the skin incisions that are associated with granuloma or skin erosions. Here in describe a simple method to secure the running absorbable subcuticular suture completely inverted in the skin that does not require subsequent removal.

INTRODUCTION

Many surgeons prefer subcuticular absorbable suture over the nonabsorbable transcutaneous sutures or skin staplers as it is simple, quick, no need to remove, maintains tensile strength for longer time and will not cause cross-hatching marks. But securing this type of suture needs either an external bead, knot or end up in subcuticular knots, which are prone to stitch granuloma or knot erosion of the skin ¹. To overcome these problems knot free securing of absorbable subcuticular suturing technique was described ². But this was subjected to criticism because of its complexity and multiple transdermal exits required for securing the suture ³.

We here in describe a method to secure the subcuticular absorbable suture ensuring proper subcutaneous placement of minimal bulk of knot.

The suture material is 3/0 or 4/0 polyglactin910 (Vicryl® or Monocryl® Ethicon Ltd). First a single subcutaneous suture is placed at one end of the wound with the knot inverted in to the deeper plane. The free end, bearing the needle, pass from deeper plane to the superficial subcuticular plane at the corner of the wound. This end is used for the continuous subcuticular suturing approximating the wound edges till the other end of the wound. At this corner the only the subcutaneous tissues cut further with scissors for 0.5cm leaving the overlying skin intact for the knot to lie securely. Then the needle passes from the subcuticular plane to deep side of the subcutaneous fat on one side and again from the deep side to the superficial subcuticular plane at the other side of the corner so as to make a loop between them.

Through this loop pass the remaining length of free suture so as to make a loop in loop and finally the free end through the second loop like an Aberdeen's knot (see Figures).

Pass the needle from the corner of the wound in to the slit in the subcutaneous tissues then come out of the skin about one centimeter away from the corner. Pull the suture firmly so that the knot slip in to the subcutaneous tissue slit. Cut the suture at the level of skin surface so that the free end will recede in to the subcutaneous tissues. No part of the suture will be visible outside as the knots at both ends are completely with in the subcutaneous space and does not require subsequent removal. The author uses this method routinely to secure the subcuticular suture without any complications pertaining to securing the knot.

Figure 1

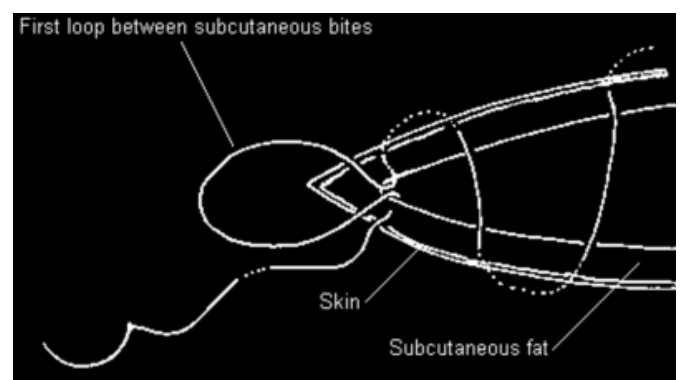
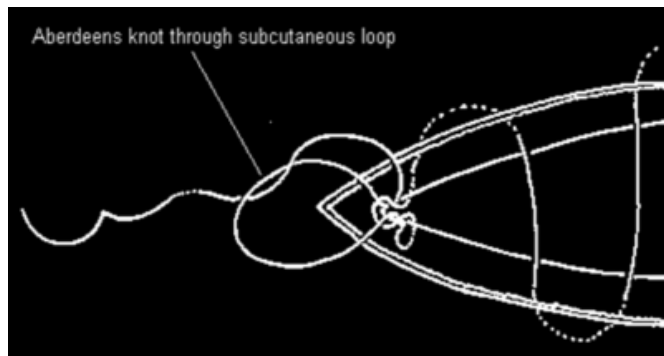


Figure 2



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