

## **A Novel Customized Running Subcuticular Suturing Technique Valuable for the Maxillofacial Surgeon**

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### **Abstract**

Running sub-cuticular sutures are commonly used for surgical wound closure, which involve placement of suture material in the sub-cuticular tissues parallel with the line of the wound. Although it brings about skin apposition with minimal scarring, the removal of these sutures post-operatively almost always results in breakage within the healed tissues, thereby annoying the surgeon. A novel alteration in this frequently used technique is presented here which seems encouraging and useful.

**Keywords:** *Running Subcuticular Suture; Removal*

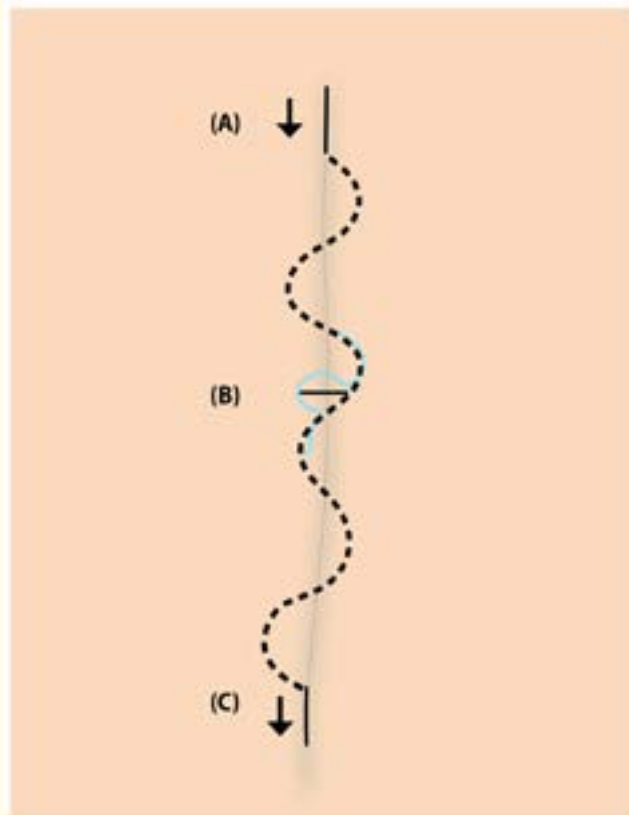
Subcuticular suturing first described by Sanders RJ [1] is a method of skin closure involving placement of stitches (absorbable or non-absorbable) in the subcuticular tissues parallel with the line of the wound. It is a continuous/running type of suturing technique, which allows skin apposition with minimal postoperative scarring and is commonly employed with extraoral approaches to the maxillofacial region.

The suturing material most commonly used for this technique is Nylon or Polypropylene, which is a synthetic, non-absorbable monofilament suture that is biologically inert, does not adhere to tissues, holds knots better and elicits minimal tissue reaction. Also it is useful in contaminated and infected wounds thereby minimizing suture extrusion and sinus formation.

Various studies [2,3] have been carried out to evaluate absorbable and non-absorbable sutures for the same, but not many, were statistically significant to dictate one's supremacy over the other. The absorbable sutures were prone to stitch granulomas and knot erosions from their buried knots, whereas the non-absorbable sutures migrated deeper into tissues due to the foreign body immune reaction and the force generated due to wound contracture.

### **Technique**

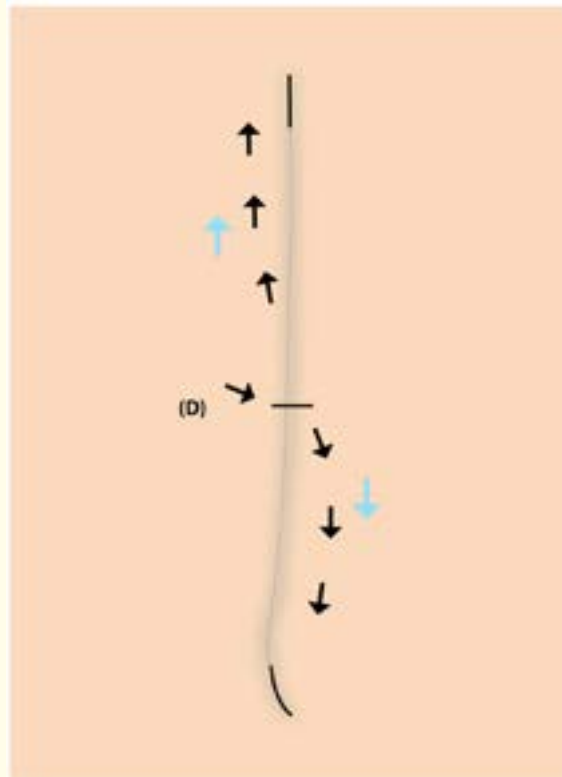
One 5-0 Nylon (Non-absorbable) suture is used for this technique. After tying a knot at the apex, the suture material enters the apex of the wound edge (Point A). The needle then travels through the subcutaneous tissue as depicted by the dotted line (Figure 1), thereby coming out at approximately the centre (Point B) as depicted by the blue line on one side of the wound edge. The needle re-enters the wound edge from the other side, passing through the subcutaneous tissue, thereby finally exiting out from the distal end of the wound (Point C). Another knot is then tied at the distal end to make sure the wound edges are correctly approximated (Figure 1).



**Figure 1:** Technique of subcuticular suturing (diagrammatic).

Usually, subcuticular suture removal is performed by cutting the knot at one end and pulling the suture away from the other. However it is observed on many occasions that certain unwarranted difficulties do occur which poses an intricate challenge to the operator. It can vary from a simple breakage of suture material within the wound to a ruptured thread trapped in the wound causing infection and dehiscence [4].

This technique involves removal of suture by cutting the suture material at Point D (Figure 2), thereby preventing any such mishap. The two ends are conveniently pulled in different directions (Figure 3,4) making sure the process is absolutely uneventful, hence preventing any complications.



**Figure 2:** Removal of the subcuticular suture (diagrammatic).



**Figure 3:** Technique of the subcuticular suture.



**Figure 4:** Removal of the suture.

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