

Hand Glove: A Tool Not Used to Its Potential

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Abstract

A hand glove is not only used to maintain sterility of the procedure but also to protect the physician from communicable diseases. A glove can be used in a variety of procedures, which are commonly performed in clinics. These help the doctor by serving as a tool in procedures and in cutting the cost of these procedures. A hand glove could be used in various innovative ways as highlighted in this article.

Keywords: Cooling pad, dressing, hand glove, tourniquet

INTRODUCTION

Glove is a tool, which is not used to its full potential in a procedure room, it could be used in various ways and could change conventional methods of few surgeries. Gloves help maintain sterility in each procedure by reducing the chances of infection for both the physician and the patient, so they must be preferably used in every procedure. A hand glove could be used in various ways as described in this article.

APPLICABILITY IN PROCEDURES

1. Creating a sterile surgical field: It could be achieved by only exposing the surgical site of procedure. The patient is made to wear the glove over the hand or feet and if site of surgery is finger or toe then a slit should be made over finger projection of glove and it is rolled back, it creates a sterile site for surgery as well as serve as a tourniquet [Figure 1].^[1] If tourniquet is not required then finger projection is cut and glove is worn. If surgical site is palm or sole, then it can be prepared by making the cut over the glove to expose only the surgical site.^[2]
2. As a tourniquet for nail surgery: Tourniquets are essential for nail surgeries for which usually either a gauge or tourniquet rings are used. A glove can also be used as a tourniquet. The rubber elastic at the end of the glove is cut [Figure 2A] and is entangled over

the toe or finger and it works perfectly as a tourniquet [Figure 2B], whereas the rest of the glove is used to create a surgical field. After surgery, the tourniquet should be removed and pressure dressing should be carried out.

3. Dressing: Pressure dressing is required after surgeries over fingers or toes. For that, a glove finger projection of one size smaller than the finger can be used, which serves not only as a dressing but also prevents bleeding.^[3] For example, if surgery is performed over middle finger index then finger glove can be used for dressing [Figure 3]. Pressure induced by the glove dressing should be checked by gentle pulling to make sure that it does not cause ischemia. If such a case is suspected, then the finger projection of a bigger size should be used. The glove dressing also helps in keeping the surgical site dry and sterile.
4. Maintaining the sterility of electrocautery handpiece: The sterility of the handpiece is not always taken care of, which can act as a source of infection. Though some physicians use cling film to cover the handpiece, using a glove is a better option as far as sterility is concerned. A slit is made over the finger projection, handpiece is inserted into it, and the probe can be attached over the

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handpiece through the slit. The elastic band at end of the glove is cut and is entangled at the end of handpiece [Figure 4].

5. As post-procedure cooling pad: The use of disposable cooling pads is ideal for post-dermatological procedures such as laser and chemical peel but due to cost factors, cooling pads are reused, which can expose the patient to pathogens. The glove is filled with tap water and a knot is tied over the end

and then it is kept in freezer for at least 8h and then it can be used as a cooling pad after procedures [Figure 5].



Figure 1: Slit is made on tip of finger projection and it is rolled back to act as tourniquet



Figure 3: Index finger glove projection is used for dressing on middle finger

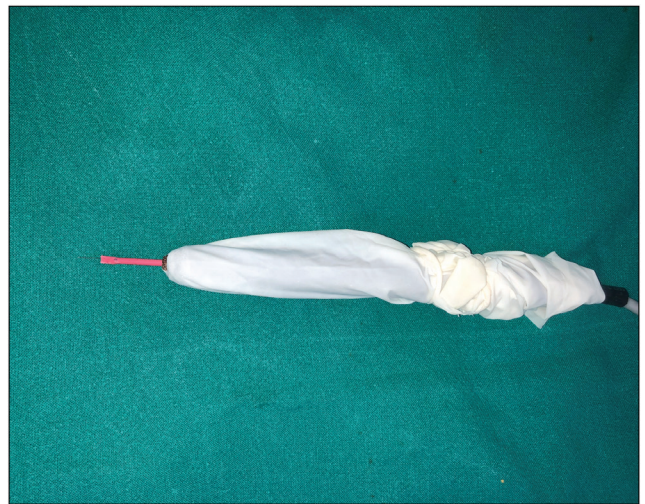


Figure 4: Hand glove with slit on index finger projection is used to cover hand piece and elastic band is entangled at end

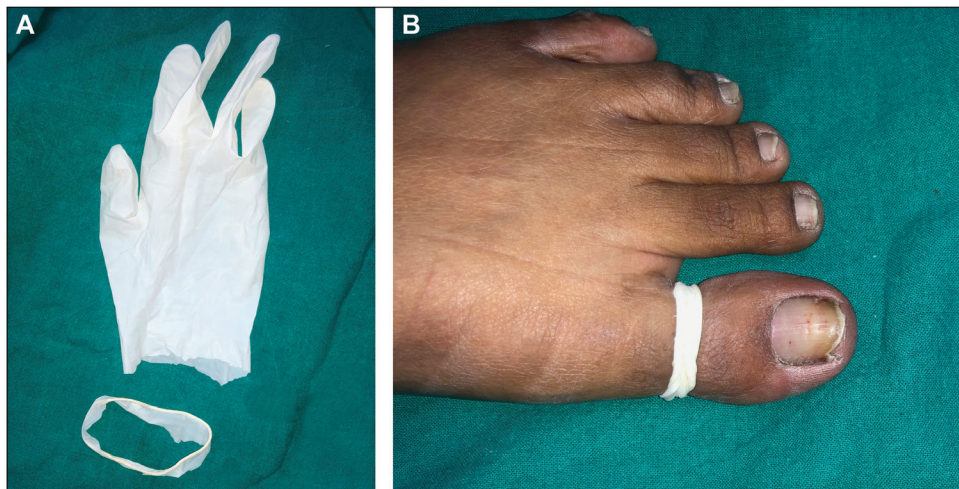


Figure 2: (A) Elastic band at end of glove is cut. (B) Band is entangled to toe to act as tourniquet



Figure 5: Frozen hand glove filled with tap water used as a cooling pad

6. As a tool to deliver circumferential cryoanesthesia: Decrease in the temperature of skin to a depth of 2–4cm can decrease the activation threshold of underlying nociceptors and velocity of pain signals by nerve,^[4] which results in anesthesia at the site of cryo-application. Cryoanesthesia has been used in procedures such as steroid injection in keloid with significant reduction in pain.^[5]

Procedures such as platelet-rich plasma injections are painful as multiple injections are required in single sitting and other methods of anesthesia, such as nerve block, have its own adverse effects. In a study by Agrawal *et al.*,^[6] a hand glove filled with water was frozen and two finger projections were applied over scalp for 2min to induce cryoanesthesia, and a needle was inserted in between the projections to reduce pain.

PRACTICE POINTS

1. Glove could be used in various ways to create sterile field for surgery.
2. Wrist end of the glove can be cut and used as tourniquet loop. The closed end of the finger can be cut and rolled back ward to make tourniquet.

3. Dressing with finger projection of glove keeps dressing dry, sterile, and prevents bleeding.
4. Using glove for covering handpiece maintains sterility.
5. Frozen glove filled with tap water could be used as a cooling pad.
6. Frozen glove can be used as circumferential cryoanesthesia.

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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