Adhesive tape: A valuable material following preoperative site hair shaving!!

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Cover letter
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My opinion

Abstract: The shaving of operative sites had become well-established by the early twentieth century. Shaving preoperatively should not be performed routinely. However, if required a clipper has to be used. The question then arises as to what happens with the shaved hair. I have therefore developed an effective and easy way to collect the shaved hair from the operative site using adhesive tape technique mounted on a gloved hand.

History: Early documentation or reference to the practice of shaving hair from operative sites is difficult to establish. The first reference however comes from Smith’s account of surgical practice at Bellevue Hospital in the United States of America which dates from the late eighteenth century. Even so, the practice may have been in use for several decades before:

“The patient was often put on the (operating) table un-bathed and grimy with dirt; superfluous hair was sometimes shaved off.”

The surgeons at that time believed that wounds, in all probability, may heal more quickly if hair was prevented from becoming entangled in the sutures and wound during closure.

The shaving of operative sites became well-established by the early twentieth century, a ritual which has remained constant until recently.

Background:

The timing of preoperative shaving has been shown to have an important effect on postoperative wound infection rates. Removal of hair immediately prior to the operation results in lower infection rates than removal of hair the day before an operation. A possible explanation for this is that bacteria do not have as long to infect the traumatised dermis during a shorter preoperative period. However, in a survey of operating theatre practices for infection control, it found that in 433 randomly selected US hospitals, the timing of shaving was actually dictated by individual prejudices rather than by scientific data.

Routine hair removal is not recommended according to NICE guidelines. However, if hair has to be removed to facilitate surgery or the application of adhesive dressings, clipping rather than shaving appears to result in fewer surgical site infections.

Certainly, in plastic surgery the procedure of hair removal is performed immediately before the operation using an electric clipper. The question then arises as to what do we do with the shaved hair? Where does it end up? Most often the shaved hair is relatively left behind over the shaved area. Occasionally a wet swab is used to collect the trimmed hair from the surgical site before prepping.

The use of adhesive tape to collect the shaved hairs has been used on numerous occasions without actually realising that it could be more effective in removing the remnant hair over the surgical site compared to other established methods. Therefore realising the significance of this, and after observing different practices in holding the adhesive tape I have developed an easy and effective technique which incorporates the tape over a gloved hand.

Technique: Any adhesive tape can be used to perform the procedure. However, silicone or Micropore tapes have been proved to be the best for this application since they are gentler to the surface of the skin (Figure 1.).

The technique involves forming a loop of the tape with its adhesive facing the outside. This loop has to be large enough to enable a gloved hand to pass through it. The tape is then run over and over the palm and the dorsum of the hand until it is completely rolled with tape (Figure 2.).

The adhesive part of the tape is subsequently showing outwards so that it allows a smooth and effective sticking of the shaved hair from the skin surface.

Conclusion

The end result allows an effective use of both hands synchronously during the shaving procedure. One hand uses the clipper and the other hand with tape positioned collects the shaved hair immediately. This reduces the chances of trimmed hair remaining on the surgical site and therefore subsequently reducing the risk of infection.
Reference(s)

Illustrations

Illustration 1

Figure 1: An example of a Silicone adhesive tape

![Figure 1. An example of a Silicone adhesive tape]

Illustration 2

Figure 2: Steps of mounting the tape on a gloved hand

![Figure 2. Steps of mounting the tape on a gloved hand]
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