

A novel technique for continuous cooling till re-establishment of blood flow during major limb replants

Sir,

Although it is well accepted that amputated part should be preserved properly at a low temperature till the blood flow is re-established, how to do it while the surgery is on? It is still considered a challenge

and a cause for frustration to achieve it in a sterile surgical field, especially while performing major limb replantations.^{1,2]}

We present here a novel, easy and economic technique that according to authors should be able to address majority of issues of ongoing cooling during surgery.

Firstly, the crushed ice is filled in unsterile gloves and they are closed using a thread or rubber band. Then, a sterile double-layered polythene sheet is rolled and closed at one end and the gloves are laid down in a line by another person inside rolled polythene sheet. Afterwards, the sheet is completely rolled with the sterile surface exposed and other end is also closed. Now, a sterile cling sheet (bandages are less efficient) is used to completely seal this roll from end to end, and an ice pack is ready to be used in the sterile field [Figure 1]. We can alter the size and number according to our needs, and unused ones can be preserved in a freezer for future use during the surgery [Figure 2].

This method has been used on a bilateral upper thigh replant done at Specialist's Hospital, Kochi, India.. It was not successful as one limb had to be removed due to infective pseudoaneurysm of the femoral artery while other one developed venous thromboses. Both limbs were removed between post operative days 6 and 10 but the patient survived.

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Figure 1: (a) Crushed ice, (b) unsterile glove for filling ice, (c) filled up unsterile gloves with ice, (d and e) sterile sheets being rolled and filled with unsterile packs, (f) sterile ice packs prepared and ready for use after being sealed with cling drape



Figure 2: (a) Sterile ice packs being used during surgery, (b) ice packs cooling the prepared amputated part for replantation

Conflicts of interest

There are no conflicts of interest.

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