



A STUDY OF EFFECTIVENESS OF MARKING OUT THE ANAESTHETISED AREA FOR HARVESTING SPLIT THICKNESS SKIN GRAFT UNDER LOCAL ANAESTHESIA

Surgery

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ABSTRACT

Management of wounds has always been and always will be one of the primary jobs of a surgeon. Split thickness skin grafting [SSG] is one of the most common and simplest ways to manage a chronic or an acute wound. Harvesting of split thickness skin graft is a procedure, which produces considerable pain to the patient and requires anaesthesia. Harvesting of SSG under local anaesthesia has been described. Often the area that is anaesthetised is difficult to identify resulting in the skin graft blade trespassing into an un anaesthetised area causing pain to the patient. We present here a simple technique, which will help the surgeon identify the area anaesthetised thus avoiding pain.

MATERIALS AND METHODS: The donor area for the split thins skin graft was marked out using the technique of leaving behind the hypodermic needles and the effectiveness of the technique was assessed using a visual analog scale at the completion of the graft harvest.

RESULTS: Fifteen patients underwent split thickness skin graft under local anaesthesia during the study period. Eight patients had a VAS score of 0 and 5 patients has a score of 2 and two had a score of 3. No patient developed any complications as a result of the procedure.

CONCLUSION: This simple technique of marking the anaesthetised area is effective and safe for use during the harvest of split thickness skin graft.

KEYWORDS

INTRODUCTION

Management of wounds has always been and always will be one of the primary responsibilities of a surgeon. Split thickness skin grafting [SSG] is one of the most common and simplest ways to manage a wound.

The benefits of doing a procedure under local anaesthesia like early recovery, lower risk, lower cost and the possibility of the surgery being ambulatory are well established [1,2,3]. Further patients with chronic wounds who require a split thickness skin graft have multiple co morbidities which increases the risk of general anaesthesia [4,5]

Harvesting of SSG under local anaesthesia has been described [6] but often the procedure turns out to be painful for the patient because it is not easy to identify accurately the area that is infiltrated with the local anaesthetic. This makes the harvest painful for the patient and difficult for the surgeon.

The usual methods of marking the anaesthetised area, like using a maker pen are both cumbersome as we need to sterilise them prior to surgery and is also ineffective since the ink gets smudged once the area is prepped with alcohol based agents and liquid paraffin. The sterile markers that are commercially made are expensive and are often not available in many parts of the world.

We describe here a very simple technique that will substitute the need for a sterile marker and would enable the surgeon to accurately identify the area that is anaesthetised thus avoiding pain for the patient and also enabling the surgeon to do an optimal job.

MATERIALS AND METHODS

The patients who had wound that were suitable for undergoing split thickness skin graft under local anaesthesia were selected for this procedure

The donor site is prepped in the usual fashion with iodine solution. The dose of the local anaesthetic is calculated based on the weight of the patient. We use 2% lignocaine with 1/1,00,000 adrenalin, which is diluted to 50% with normal saline.

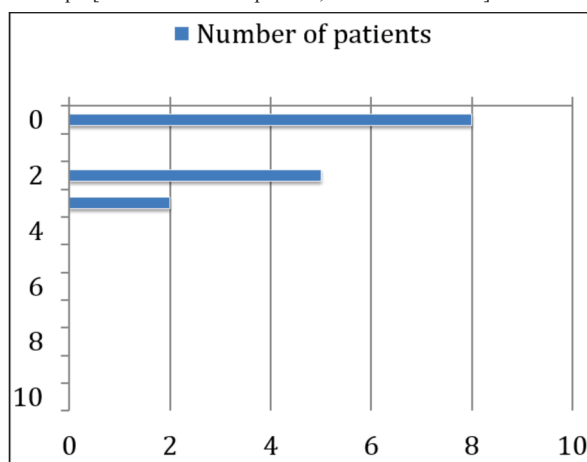
Ten-millilitre syringe with 23G needle is used for infiltration. First the needle is inserted into one of the corners of the area, which is chosen to be anaesthetised and local anaesthetic [LA] is infiltrated. Following infiltration the needle is left in situ and is not removed from the donor site. Another needle [23G] is affixed to the syringe and the procedure is repeated with the other three corners of the chosen donor site. Thus we have four needles affixed to the four corners demarcating the area that is to be anaesthetised. Following infiltration the effectiveness of the anaesthesia is tested and following which the SSG is harvested from the area bounded by the four needles. Care is taken not to transgress from the area marked by the needles to avoid pain. Once the graft is harvested a visual analog score was administrated to the patient. The

graft is now ready to be transferred to the recipient area.

Table 1 : Vas scores of the patients undergoing split thickness skin graft under local anaesthesia using the four needle technique

VAS	Number of patients	Severity
0	8	No Pain
1	0	Mild Pain
2	5	
3	2	
4	0	Moderate Pain
5	0	
6	0	
7	0	Severe Pain
8	0	
9	0	
10	0	

Fig 1 : chart showing the distribution of VAS scores patients undergoing split thickness skin graft under local anaesthesia using the four needle technique [X axis - Number of patients; Y axis - VAS scores]



RESULTS

Fifteen patients underwent split thickness skin graft under local anaesthesia during the study period. Eight patients had a VAS score of 0 and 5 patients has a score of 2 and two had a score of 3 [Fig 1]. No patient experienced moderate or severe pain during the surgery [Table 1]. No patient developed any complications as a result of the procedure.

DISCUSSION

There are various reasons for the failure of local anaesthesia for

harvesting SSG. The area to be anaesthetised is large hence if the LA is not infiltrated in an organised fashion covering all the margins of the area, the anaesthesia might fail. Since the skin over the donor site is stretched while harvesting the anaesthetised area becomes distorted and the blade may cross from an anaesthetised area to an unanaesthetised one causing pain.

The presence of the four needles as markers guides the surgeon to properly anaesthetise the entire area lying within the needles and also to stay within them while harvesting.

With practice and consequent increasing confidence one can opt for local anaesthesia for most cases of raw area requiring SSG thus reaping the benefits of local anaesthesia such as early recovery, decreased complications and cost saving.

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