

## Stripping without a Stripper

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### Abstract:

Varicose veins afflict some 10 to 20% of the population in the west. It is believed to be less prevalent in the developing nations<sup>1,2</sup>. Though there are absolute indications of surgery for varicose veins, people in Nepal come for treatment of the varicose veins either to join the army or to work abroad.

Not all hospitals in Nepal are equipped with a vein stripper. In KMCTH, we studied 29 patients who had their long Saphenous veins stripped either with a stripper or by tunnelling around the Saphenous vein.

We found that the long Saphenous vein could be stripped via the tunnelling method with an additional incision above the knee joint which is cosmetically accepted by our patients.

Moreover the patients were much satisfied because of minimal or no bruises in the post-operative period as compared to those who had the long Saphenous vein stripped with a stripper.

*Keywords: varicose veins, stripping, stripper.*

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Varicose vein is a common malady afflicting some 10 to 20% of the population in the west (though thought to be less prevalent in the developing countries) encountered both in the young adults and the elderly. Though laser, radiofrequency, and ultrasound ablation of the varicose veins have made their way into surgeon's armamentarium, no technique has yet shown to be superior to the conventional surgery of stripping of the veins and phlebectomies of the distal varicosities<sup>3,4,6</sup>.

The standard indications for surgery have been for cosmesis, symptoms and its complications<sup>1,7</sup>. But in Nepal most patients want their varicose veins treated either for joining the army or for working abroad thus contributing to the volume of asymptomatic cases that undergo surgery.

### Patients and Methods

A consecutive series of 29 patients undergoing long Saphenous vein stripping in Kathmandu Medical College was taken up for the study. Their age ranged from 16 to 68 years.

Thirteen of the patients had their veins stripped with a reusable metallic stripper and the remaining sixteen had their Long Saphenous Veins stripped after forming a subcutaneous tunnel along the vein with a long artery forceps.

After making a groin incision all the tributaries of the long Saphenous vein was identified and ligated. The long Saphenous vein was traced up to the sapheno-

femoral junction and there the long Saphenous vein was flush ligated. Formal stripping of the long

Saphenous vein was carried out after having guided the metallic stripper from the proximal part of the vein to the distal part at the upper thigh. The vein was stripped proximally to distally. There was difficulty in negotiation of the stripper in two cases and the stripper broke in one of them<sup>8</sup>.

When stripping without the stripper, the initial stage of ligating the tributaries of the long Saphenous vein and its flush ligation was the same as for above. Then a subcutaneous tunnel was formed distally along and around the vein by the help of long straight artery forceps and blunt hand dissection. Perforators encountered were tied under vision. Second incision is given proximal to the knee joint and similar subcutaneous tunnel is made proximally along the vein to form a continuous tunnel with the proximal one. Dodd perforator is ligated under vision. The vein is pulled distally. Sometimes the silk tied to the proximal end is pulled to facilitate the procedure.

The third incision is made distal the knee joint around the mid-thigh region and the vein is pulled distally after forming a subcutaneous tunnel around the vein in a similar manner.

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Long Saphenous Vein Stripped by Tunnelling Method



Incompetent Valve of the Long Saphenous vein Opened



### Results

Mild to marked bruising was observed in all the cases in which the stripper had been used<sup>7,9</sup> whereas only 4 of the 16 patients with the tunnelling method had mild bruises.

One patient developed haematoma in the group in which a stripper was used.

In the tunnelling group, one developed an abscess after nine days of surgery. None had haematoma, and none seemed to mind the one extra above knee incision. In the stripper group a few of the patients were alarmed to see the bruises during the post-operative dressing. In contrast, in the non-stripper group, patients were highly satisfied. Unfortunately, as in most developing countries, patients are not available for long term follow up.

**Table 1.** Comparison of the complication between the two methods

	<b>Vein Stripped with a Stripper</b>	<b>Vein Stripped without a Stripper</b>
<i>Number of Patients</i>	13 (45%)	16(55%)
<i>Bruise</i>	13 (100%)	4(25%)
<i>Haematoma</i>	1(8%)	0(0%)
<i>Infection</i>	0(0%)	1(6%)
<i>Patient Worry</i>	7(50%)	0(0%)
<i>Follow Up</i>	-----	-----
<i>No. of Incisions</i>	2	3

### Discussion

Flush ligation of the long saphenous vein and use of stripper remains the standard surgery in patients' with sapheno-femoral incompetence and varicose veins in its territory. In certain number of cases it becomes very difficult to negotiate the stripper. The procedure is associated almost inevitably with bruises and occasional haematoma. Negotiation of the stripper can be quite frustrating sometimes. Some of the patients were alarmed to see the bruises and needed to be explained that it would resolve on its own. In some instances especially in woman, this becomes unacceptable if the bruises persist for a long time.

Stripping of the vein is immensely feasible even without a stripper by formation of a tunnel along the

length of the vein. Though bruising was expected because of the blunt dissection, it was uncommon due to the visual tying of the perforators especially the perforator of Dodd which is a substantial vessel. There was no haematoma in our series. The infection, in fact an abscess formation in the tunnelling group can be attributed to the blunt dissection. The problems associated with the negotiation of the stripper, does not arise in this group.

All the patients were lost to follow up; so the long term results cannot be predicted.

### **Conclusion**

Stripping of the Long Saphenous Vein by forming a tunnel along the vein is a reliable and simple procedure that can be undertaken even in the district hospitals where strippers may not be available

The procedure is seen to be associated with less bruising.

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