Clinical Study

Great Saphenous Vein Conventional Surgery in Brazil’s Outpatients

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Objective. Evaluate great saphenous vein conventional surgery performed on an outpatient basis. Methods. Retrospective analysis where patients complain varicose veins with saphenofemoral incompetence and great saphenous vein reflux on Doppler ultrasound. These patients were consecutively enrolled to high ligation plus stripping, either to the ankle or only to the knee, or crossectomy alone.

Results. Data from 106 surgery outpatients with CEAP clinical classification is as follows: varicose veins (59.5%), edema (15.1%), skin alterations (9.4%), healed ulcer (9.4%), or open ulcer (6.6%). The techniques employed were 66 high ligations plus stripping to the ankle, 28 high ligations plus stripping to the thigh portion, and 12 crossectomy. No major complications were observed. Overall, 18% reported symptoms consistent with saphenous nerve injury. All but one belonged to the stripping to the ankle group.

Conclusion. Great saphenous vein conventional surgery performed on outpatients is very safe. Nerve injury is frequent when stripping extends the ankle.

1. Introduction

Chronic venous insufficiency affects a great amount of World's population. The main factors involved in its development are age, obesity, family history, female sex, and multiple pregnancies. Together with the clinical presentation, Doppler ultrasound scanning (DUS) enable a reliable preoperative diagnosis [1]. Recently, minimally invasive treatments such as radiofrequency (RF) and endovenous laser treatment (EVL T) requiring only tiny incisions has shown very satisfactory results [2]. But in most institutions where cost is a main issue, more conventional surgical treatments, such as crossectomy with or without stripping of pathological vein segments and resection of varicose side branches, are commonly used procedures [3]. The main purpose of this study was to determine the safety and efficacy of great saphenous vein’s (GSV) conventional surgery performed on an outpatient basis.

2. Methods

This is a retrospective study where data were carefully recorded from patients’ charts after approval from the University Hospital Ethics Committee. All patients had symptomatic primary varicose vein disease with saphenofemoral junction (SFJ) incompetence and GSV reflux diagnosed by DUS. These patients were consecutively enrolled for surgical treatment in our tertiary teaching hospital between 1997 and 2001. Three different techniques were employed depending on DUS findings, as formal SFJ ligation plus GSV downward stripping, either to the ankle or only to the knee, and crossectomy alone. The severity of the varicose disease was graded according to the CEAP scoring system for chronic venous disease. All procedures were performed early in the morning with a subarachnoid or an epidural blocking anesthesia according to the responsible physician. Then the patients were discharged on the same afternoon.
3. Results

Data collected encompassed 106 surgery outpatients ranging in age from 17 to 73 years. The female predominance was 70%. CEAP clinical class classification revealed patients presenting with varicose veins (59.5%), edema (15.1%), skin alterations (9.4%), healed ulcer (9.4%), or open ulcer (6.6%). The preferential performed anesthesia was an epidural blocking (94%). The surgical techniques employed as described were 66 high ligation plus GSV complete stripping to the ankle, 28 high ligations plus stripping restricted to the thigh portion of the GSV, and 12 high ligations without saphenectomy (also named crossectomy). The mean duration of these procedures was 112 minutes. No major complications were observed during surgery. Only one patient complained of a large thigh bruise on the 7th postoperative day that was treated conservatively. Overall, 18% of patients reported symptoms consistent with saphenous nerve injury at some time after operation. All but one belonged to GSV complete stripping to the ankle group. These were the only side effects reported during the mean 24 months followup.

4. Discussion

The surgical treatment of primary varicose veins associated with GSV reflux has evolved into high ligation of the GSV, with ligation and resection of all tributaries entering the SFJ and stripping of the thigh portion of the GSV, with stab-avulsion phlebectomy of clusters fed by incompetent perforating veins [4]. Some have objected to inclusion of the thigh saphenectomy, believing it to be unnecessarily traumatic and wasteful time. These objections are more offset by several studies showing that the GSV stripping reduces recurrence of both reflux and varicosities when compared to crossectomy alone [5].

As a remarkable result several patients reported some symptoms or sensations causing moderate discomfort and consistent with nerve injury in any way. The great majority of them belonged to GSV stripping to the ankle group (19/66). This kind of deficit was most commonly related in the vicinity of the medial malleolus, and, despite its clinical effects might not limit activities, all patients complained spontaneously about it. As a general impression showed by this study and also reviewing the literature it is suggested that the nerve is frequently affected when stripping the complete GSV [6].

On the other hand an amount of these deficits may have been due to skin incisions and dissection, resulting in a direct injury to the saphenous nerve and a local cutaneous nerve or caused by nerve branch avulsion and injury resulting from tributary phlebectomy. So patients were considered to have saphenous nerve deficits only if they had neurologic symptoms within the distribution of the saphenous nerve on the operated leg and lacked abnormalities outside the distribution of the saphenous nerve or in the contralateral leg.

And, despite direct injury caused by dissection may explain many of the identified deficits, the pattern of injury location consistently with previously described vulnerable nerve branches near the medial malleolus suggests that, although downward stripping has been considered a method to minimize the risk of an avulsion injury, GSV stripping cannot be ruled out as a potential source of nerve injury when it extends below the knee.

Of course this study was limited by its size and retrospective nature. However, the absence of significant postoperative complications or complications on review charts suggests that our results reflect that GSV conventional surgery is a reliable treatment performed on an outpatient basis and also can be comparable to other minimally invasive treatments [7]. Although this was not the purpose of the study, the incidence of recurrent clinical varicosities was not different from those established previously.

5. Conclusion

The treatment with great saphenous vein’s conventional surgery performed on an outpatient basis is very safe. Symptoms of nerve injury are frequently reported when stripping extends to the ankle.

References

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