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THE COMPARATIVE ANALYSIS OF COMMON TREATMENT FOR VARICOSE VEINS

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ABSTRACT

Through our hospital 30 cases of patients with varicose veins, respectively, using the new minimally invasive stripper (NMIS) therapy, endovascular laser closure (EVLA) treatment, four treatments a translucent peeling (TIPP) treatment. To evaluate the clinical efficacy of three kinds of minimally invasive surgical treatment of saphenous varicose veins. Statistical analysis of results by comparing the amount of bleeding in patients EVLA minimum and a maximum TPIP patients, hospital stay EVLA group of patients with the shortest healing time after surgery in patients with the shortest TIPP group. Select a timely and effective treatment for the clinical treatment of varicose veins provides a constructive comment.

1. INTRODUCTION

Varicose veins are due to blood stasis, vein wall is weak and other factors, led to the varices expansion. A plurality of body parts of varicose veins can occur, such as haemorrhoids it is actually a varicose clinically visible along with oesophageal varices, varicocele and abdominal varicose veins, and so on. Venous problems usually lead to vein blood deposition, vein dilation, bending, not blood reflux occurs pigmentation, eczema, dermatitis and stasis ulcers, mainly in long-standing workers and heavy manual workers [1]. The most common site of varicose veins in the lower limbs. It is worth emphasizing, varicose veins show itself may be secondary to other diseases, such as vena cava occlusion, should be actively treated primary disease. Clinical manifestations of their condition shown in Figure 1.



Figure 1: Clinical manifestations

Many causes of varicose veins, the most common lower extremity varicose veins are simple, and its main function of disease because of femoral saphenous vein insufficiency. Another important cause of disease seen in primary deep venous insufficiency (PDVI), because often combined saphenous vein insufficiency, superficial veins showing more tortuous expansion. In addition, after the formation of deep vein thrombosis syndrome, deep venous reflux because poor, the occurrence of superficial vein compensatory tortuous expansion; lower extremity arteriovenous fistula, Klippel-Trenaunay syndrome may also have varicose veins of lower extremity performance; the lower chamber

venous obstruction, such as Budd-Chiari syndrome, can also lead to varicose veins. The common clinical manifestations of varicose superficial-like earthworms, was protruding skin, varicose form of pellets or nodular; leg soreness, skin pigmentation, scaling, itching, ankle edema; abnormal limb feeling, tingling, itching, numbness, burning sensation; skin temperature, pain and tenderness; local gangrene and ulcers.

2. COMMON TREATMENT

Great saphenous vein varicosity is a common clinical disease present, but also a lower extremity venous disease. Clinically normal working life for the patient and the patient's health will cause great impact, so in a timely and effective treatment is extremely important for patients. Studies have shown that conventional surgery and conservative treatment for patients have been unable to play a better therapeutic effect, and therefore minimally invasive surgery for varicose veins patients becomes extremely important. Clinical manifestations of varicose veins appear red or blue skin like cobwebs, maggot-like twist paid blood vessels, tumours or lumps like tree nodules, abnormal swelling veins, varicose, have a greater impact on patients' quality of life and physical appearance [2]. New minimally invasive exfoliation count is out of the entire saphenous vein stripping, surgical trauma small, can puncture the vein wall, it can reduce skin incision to reduce tissue damage and bleeding, small only shorten the time of surgery to ask, and postoperative recovery faster. The current international treatment of varicose veins has entered the era of minimally invasive, minimally invasive surgical procedure included major stripper method, intravascular laser photocoagulation, RF closed legitimate, foam hardener law, subcutaneous endoscopic ligation of traffic, and the transparent spin resection, etc., various surgical methods have their own characteristics. Hospital, where the current process of varicose veins in patients with therapy, commonly used in minimally invasive treatment methods are novel stripper (NMIS) therapy, endovascular laser closure (EVLA) peeling treatment and transparency (TIPP) treatment three treatments.

2.1 New Minimally Invasive Stripper

New minimally invasive exfoliation is produced by the German company Aesculap AG products, including stainless steel wire guided stripper with FEP coating; POM handle material; POM stripper head diameters of 9, 12, 15 mm; POM nut can demolition, one-time use. as shown in picture 2. In use, cut from the inside of the tread and find the great saphenous vein, the saphenous vein along the quiet, small residual vein stripping cystectomy available spots [3]. Thus, compared with traditional surgery, minimally invasive new stripper and less small incision, shorter operative time, the operation is simple, precise treatment.



Figure 2: New minimally invasive stripper

Common treatment method is to take the inside of the groin incision, conventional free the great saphenous vein, sets a flag silk. Then take the inner ankle incision to free the great saphenous vein, the distal end ligation, the proximal end of the insertion guide wire stripper, determine the guide wire lumen in the great saphenous vein, from saphenofemoral cut at the junction of 5 mm. Proximal ligation, all branches without ligation, ligation of the distal end to the guide wire, the guide wire placement head end peeling head, stripped saphenous vein. If you cannot be a complete stripping, stripping with the law several times. Each varicose vein stripping branch point. Elastic bandage after 2 weeks.

2.2 Endovenous Laser Ablation

Endovascular closure technique is the use of laser thermal effect of laser coagulation of the blood vessel degeneration, so that the vessel lumen closure achieves the purpose of treatment of varicose veins. Currently laser intravascular coagulation abroad has almost replaced traditional surgery. In the process, we use laser puncture using Seldinger technique into the vascular puncture sheath, use 18 G intravenous catheter as puncture sheaths. Use 12 W, 1 s pulse interval 1 s parameters. It is reported that 1470 nm laser can reduce postoperative pain and subcutaneous bruising. At present, many studies have shown that laser treatment of saphenous varices with saphenous vein stripping treatment rather, can effectively eliminate the saphenous vein reflux, to avoid recurrence. Laser treatment also beautiful, rapid postoperative recovery, less postoperative pain, and so on. We observed the efficacy of endovascular laser closed surgery, less complications, shorter hospital stays, postoperative and aesthetic advantages in clinical practice. Varicose veins near the skin ulcer patients had thrombosis or infection phlebitis, venous lumen has been closed, could not be placed laser, laser therapy is not recommended [4].

We do not recommend the use in patients with varicose veins EVLA diameter greater than 1 cm, because there will be a closed venous insufficiency, recurrence, postoperative phlebitis, pain, infection and other complications after vascular lumen too. EVLA especially applicable to the cosmetic requirements, affordability, less severe varicose veins female patients. Endogenous laser therapy is the treatment of great saphenous vein of a new technology, the principle is the exact damage to the vessel wall by a laser thermal effect to achieve vascular closure and fibrosis, the technology needs of small surgery, no postoperative scars, simple, quick, after the reaction, quick recovery features, almost after 2-3 d patient can resume normal work. Minimally invasive ablative techniques with respect to the cavity laser therapy When asked on more dominant, the other cavity laser therapy has significant cosmetic advantages of the minimally invasive ablative technology has obvious economic advantages.

EVLA treatment methods: conventional high ligation of the great saphenous vein. In the front of the ankle using Seldinger vascular puncture sheath puncture technique set man, who built the laser fiber in the sheath, and the greatest saphenous vein ligation site. Start laser treatment, the use of 12W, 0.5s pulse interval of 0.5 s arguments, from the great saphenous vein ligation site began firing laser to 3-5 mm long step down the withdrawal of laser, each emission lasting about 1s. Ice saline flush skin laser acts with them, to avoid burning [5]. Estimated

arrival laser sheath puncture site, withdraw the sheath puncture, then excimer laser until the laser at the exit from the inner ankle. For smaller varicose veins, the same method to be closed. Elastic bandage after about one week. As shown in Figure 3.

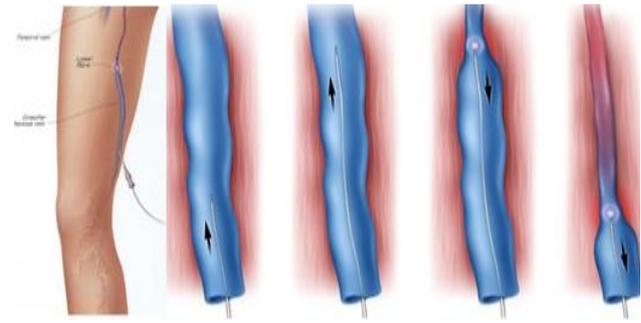


Figure 3: EVLA treatment

2.3 Trans illuminated Powered Phlebectomy

Translucent peeling mainly consists of two parts, the first part is the lighting system, and the second part is the peeling system. Mark the first before surgery of varicose veins, the first minimally invasive or traditional stripper stripping vein surgery, varicose vein and then placed in the vicinity of the lighting system in the skin, visible varicose veins, then placed peeling from another direction system, removal of varicose veins under direct vision. TIPP reported a cut less, small incision, beautiful, quick recovery after surgery, also reported a higher incidence of postoperative hematoma.

We found in the clinical observation, TIPP bleeding more, so we do not have their great saphenous vein resection, as well as the prevention of blood loss more of our regular patients without contraindications adrenaline plus 0 in 500 ml rinse solution. 1 mg of epinephrine can be effective in reducing blood loss. Anaesthesiologists also asked to monitor blood pressure. We also observed TIPP can significantly reduce postoperative healing of skin ulcers and drying time, accompanied by a large number of small tributaries varicose patients TIPP better treatment. For starters, there are cases when surgery to cut through the skin occurs, postoperative numbness of skin infection and other complications are also reported. We observed in clinical patients TIPP skin pigment significantly decreased after six months, the ulcer healed completely.

3. STATISTICAL ANALYSIS

3.1 Research Object

30 cases of patients with varicose veins, respectively, using the new minimally invasive stripper (NMIS) therapy, endovascular laser closure (EVLA) treatment, four treatments a translucent peeling (TIPP) treatment. Observed and compared three groups of blood loss, operative time, postoperative hospital stays, hospital costs and so on.

3.2 Research Methods

Use SPSS17. 0 package for statistical analysis, blood loss, operative time, hospital stay hospital costs to average values ± standard deviation, said each set of data are used analysis of variance (ANOVA), and then two LSD multiple comparison what differences there are between the two-data set P <0. 01 for the difference is remarkable. For postoperative setting P <0. 01 for the difference is remarkable.

3.3 Results

The results are shown in Table 1.

Table 1: The mean time of surgery, amount of bleeding, length of hospital stays and hospitalization fee

Group	operating time (min)	blood loss (mL)	length of stay (d)	the cost of treatment (RMB)
NMIS	76.7	128.7	8.5	10745
EVLA	72.2	86.6	5.5	18330
TIPP	75	178.5	12	18742

Comparison of three groups of operative time, hospital costs, blood loss, postoperative hospital stay. The results showed that three kinds of surgical operation time were no statistical difference. Hospital costs three kinds of surgical procedures, blood loss, postoperative hospital stay were significantly different. The incidence of three kinds of surgical complications was no significant difference. TIPP and NMIS comparison, after four days of dry skin ulcer cases statistically significant. NMIS blood loss, postoperative hospital stay is moderate, but the lowest cost of hospitalization; EVLA less blood loss, shorter hospital stays, but more expensive hospitalization; T workers PP bleeding more, long hospital stay, hospital charges expensive, but the activities of skin ulcers in patients with good effect, can promote the healing of skin ulcers. The study sample analysis found that, NMIS more used in mild to moderate patients with varicose veins, varicose veins in patients with less severe applications; EVLA used for the treatment of patients with mild varicose veins, not for the treatment of skin with active ulcer varicose veins; TIPP used for treatment of patients with moderate to severe varicose veins, not for the treatment of patients with mild varicose veins.

4. CONCLUSION

In summary, with technology and treatment philosophy of constantly updated, different treatment methods have different indications, advantages and disadvantages, a method of treatment can not completely replace other treatments, the best way is based on patient's specific condition a reasonable choice of treatment methods to minimize

complications and recurrence rate.

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