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ENDOSCOPIC SUBFASCIAL DISSECTION OF PERFORATOR VEINS IN THE TREATMENT OF VARICOSE VEINS OF THE LOWER EXTREMITIES

Introduction

In recent decades, there has been an active development of minimally invasive surgery and its formation as an independent direction in medical practice. At the beginning of the 21st century, minimally invasive technologies have found their role in surgical phlebology. This concept is understood as sparing, that is, without the use of large tissue incisions, operations that have the same goals and the same effectiveness as traditional ones. A special instrument, thin suture material, and magnifying or video endoscopic apparatus are used, allowing the operation to be performed with minimal damage to the tissues without reducing its effectiveness [1].

In recent years, operations using video endoscopic technique—endoscopic subfascial dissection of perforator veins (ESDPV) – have been widely used in patients with varicose veins of the lower extremities throughout the world, which allows to reduce the trauma of the intervention, reduce the frequency of postoperative complications, and shorten the time of hospitalization and rehabilitation [2, 3].

An important link in the pathogenesis of varicose veins of the lower extremities and trophic disorders on the lower leg is the incompetent perforator veins. Therefore, the elimination of pathological horizontal reflux is the main method of treatment and prevention of trophic ulcers. To this end, various methods have been proposed: the Linton, Felder, Cockett, and Sherman procedures, etc. However, these methods are accompanied by high trauma, a long period of hospitalization, and the rehabilitation of patients. In 1985, Hauer developed and implemented endoscopic subfascial dissection of the perforator veins (ESDPV), which allows to cross incompetent perforator veins under direct visual control and with minimal trauma, which is the key to effective treatment and prevention of varicose veins and its complications.

There are the following indications for ESDPV:

Absolute indications: varicose veins with severe trophic skin disorders: hyperpigmentation, lipodermatosclerosis, and recurrent and open trophic ulcers (C4-6 according to the CEAP classification).

Relative indications include concomitant lymphatic insufficiency, uncomplicated varicose veins with multiperforant venous reflux, and surgical treatment of post-thrombotic disease complicated by trophic disorders.

Goal

The aim of the article is to evaluate the results of treatment of patients with varicose veins of the lower extremities and trophic skin disorders using ESDPV.

Material and Methods of research

The results of the treatment of 23 patients who underwent ESDPV for chronic venous insufficiency on the background of varicose veins were evaluated. The average age of patients was 47 years (from 33 to 70 years); men were 7 (30.4 %); women, 16 (69.6 %). The duration of the disease is from 7 to 40 years. Preoperative diagnostics included examination and palpation, as well as ultrasonography of the venous system of the lower extremities with the marking of

incompetent perforating veins. In 15 cases, ESDPV was performed in patients with trophic skin changes (CEAP C4–6), of which 5 patients had open trophic ulcers. All operations were performed under peridural anesthesia. In 3 cases, ESDPV was performed in isolation; in 20 cases, a combined intervention was performed: crosssectomy, ESDPV, large saphenous vein stripping, and miniphlebectomy of varicose veins.

The results of the research and their discussion

ESDPV was performed through a skin incision up to 3 cm long below the knee joint along the medial surface in the upper third of the lower leg, which was used for stripping the large saphenous vein on the thigh. Their own fascia was dissected, and a special tube with two 5 mm channels for the camera and instruments was inserted into the subfascial space. The endoscope was moved under video control towards the incompetent perforator vein, gently pushing the tissues apart. With the help of a dissector, perforator veins were isolated. With a diameter of up to 2–3 mm, they used bipolar coagulation and cut with scissors, with a perforant diameter of more than 3 mm, clipping with subsequent intersection was used. A “gas-free” technique of tissue dissection was used, gas insufflation was performed only to remove smoke during vessel coagulation. During the operation, from 3 to 7 perforating veins were cut. At the end of this stage of the operation, a revision of the subfascial space was performed to control hemostasis. The duration of the endoscopic stage was 30 to 60 minutes. After the endoscopic stage of the operation was completed, large saphenous vein stripping was performed on the lower leg (if necessary), and the varicose collaterals were removed through 2 mm-long punctures with Varadi hooks without suturing the wounds. Postoperative compression therapy was performed according to generally accepted principles.

The postoperative period proceeded without serious complications. The patients were discharged for outpatient treatment after 4–7 days. 8 weeks after surgery, trophic ulcers healed in 4 out of 5 patients (80 %). There was no progression of the disease. In two cases, we noted a disorder of skin sensitivity in the area of the subcutaneous nerve. Minor and moderate bruising was observed in 7 patients (30 %). At the same time, we did not observe big subcutaneous and subfascial hematomas. Repeated surgical intervention was not required in any case.

Conclusions

Thus, despite the fact that ESDP is a relatively expensive and time-consuming procedure, its effectiveness, pathogenetic validity, and economic feasibility in combination with traditional operations on subcutaneous veins are obvious.

Thus, the use of this technique can significantly improve the cosmic result of the operation without reducing its radicality.

The method is especially relevant in patients with severe manifestations of chronic venous insufficiency, in whom the removal of a large saphenous vein and its branches, as well as the ligation of insolvent trophic disorders in the zone, may be accompanied by serious complications. The use of endoscopic technology makes it possible to abandon the operation of large incisions in this category of patients, reduce the time of hospitalization and rehabilitation, and improve the results of treatment.

Therefore, this surgical intervention is pathogenetically justified, especially in patients with varicose veins of the lower extremities, complicated by trophic disorders caused by the incompetent perforator veins on the lower leg.

However, at present, this operation is gradually being replaced by new, minimally invasive methods of treating perforator veins of the lower leg, such as sclerotherapy and laser coagulation.

LITERATURE

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THE CAUSES OF DEATH IN LIVER CIRRHOSIS PATIENTS

Introduction

Liver cirrhosis (LC) and its complications remain relevant today, despite the progressive development of modern medicine. LC is a continuously progressive disease, the mortality rate of which remains high (up to 35 per 100,000 population per year). The methods of medical examination of these patients aimed at identifying severe forms of the disease and preventing life-threatening complications do not solve the problem; their improvement is required. At the outpatient and inpatient stages, patients receive only symptomatic palliative care and ineffective pathogenetic and etiotropic treatment. With the development of complications of LC during the decompensation of portal hypertension, patients are hospitalized in the surgical department or the intensive care unit. The only radical method of treatment for terminal forms of LC is liver transplantation, which remains inaccessible to most patients for a number of reasons [1, 2, 3].

Goal

The aim of the present article is to analyze the structure of deaths in patients with liver cirrhosis.

Material and Methods of research

A complete non-randomized study was conducted based on a retrospective analysis of 67 autopsy protocols of patients with a postmortem diagnosis of LC. The following indicators were evaluated: gender and age of patients; duration of inpatient treatment; clinical and pathoanatomic diagnoses; and results of instrumental and laboratory research methods.

The results of the research and their discussion

The analysis of gender identity showed that there were no differences: of all the deceased men, there were 33 (49 %), and of all the deceased women, there were 34 (51 %). The average age for men was 56.1 years; for women, it was 60.5 years. The share of able-bodied age (35–65 years) accounted for the majority of male patients (75 %); among women of working age (from 40–63 years), there were 15 patients (44.1 %). The average duration of inpatient treatment was 7.9 days; mortality on the first day occurred in 25 cases (37.3 %).

The structure of the etiological characteristics of liver cirrhosis is represented by the following indicators: Toxic-alimentary LC was detected in 14 cases (20.9 %), of which alcohol addiction was confirmed in 5 patients; LC of viral etiology was detected in 13 cases (19.4 %), of which 12 people (92.3 %) had viral hepatitis C, and 1 person (7.7 %) had viral hepatitis B; cardiac LC on the background of heart failure was noted in 3 cases (4.5 %); LC on the background of Budd-Chiari syndrome (inferior vena cava syndrome) was detected in 1 case (1.5 %). However, in 35 patients (52.2 %), the etiological factor of LC was not confirmed, i.e., LC was cryptogenic.

According to the Child-Pugh LC classification, class C was present in most patients: 57 (85.1 %), i.e., in the vast majority of cases, the LC was in the decompensation stage.