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Original scientific paper

TREATMENT OF VARICOSE VEINS WITH SCLEROTHERAPY: A CASE REPORT

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Abstract

Varicose veins are visible venous blood vessels, excessively or permanently elongated, dilated or twisted, caused by the long-term influence of blood pressure inside them. The places where the dilations can occur are: the superficial, communicating and deep venous systems, but also the capillary blood vessels in the skin and mucous membranes. Different classifications are used to describe and classify the different types of varicose veins and smaller blood vessels that can be seen under the surface of the skin of the legs, the most commonly used is the following: telangiectasias (they look like spider webs), with a diameter of 0.1-2 mm, venulectasias - veins 2-3 mm wide, reticular veins - veins 3-4 mm wide, varicose veins - veins wider than 4 mm, transfascial varicosities - occur due to weakness of the communicating veins, intrafascial varicosities - occur due to weakness of the deep veins. The prevalence of varicose veins in industrialized countries is very high. An 86-year-old patient, a pensioner, comes for examination due to swelling in the right foot area, the skin is smooth and shiny, the changes are from a month ago as well as changes in the shape and structure of the toenails, complains of pain in the right leg regardless of physical activity that persists for more than a year. The patient has been on insulin therapy for DM for the last few years and previously had been on tablet therapy for 20 years. The patient underwent peripheral Doppler of the lower extremities to gain insight into the venous system. In addition to compressive therapy and oral venotonics, the patient was recommended for sclerotherapy of the VSM and VSP. One week after the second intervention, the patient reported that he no longer had pain in the right limb and that walking was therefore easier.

Keywords: varicose vein, edema, blood vessels, telangiectasia

Introduction

Chronic venous insufficiency sometimes does not cause any symptoms, but in a large number of people it has characteristic symptoms and signs. The most significant symptoms and signs are: swelling of the legs or joints, which intensify with prolonged standing, heavy, tense and tired legs, pain in the legs that increases with walking or standing, cramps and paresthesias in the legs, varicose veins, changes in skin color (brown shade of the skin especially around the ankles), increased skin sensitivity, hyperkeratosis, the appearance of venous ulcers. Varicose veins are visible venous blood vessels, excessively or permanently elongated, dilated or twisted, caused by the long-term influence of blood pressure inside them. The places where the expansions can occur are: the superficial, communicating and deep venous systems, but also the capillary blood vessels in the skin and mucous membranes. Different classifications are used to describe and classify the different types of varicose veins and smaller blood vessels that can be seen under the skin surface of the legs, the most commonly used being the following: telangiectasia (they look like spider webs), with a diameter of 0.1-2 mm, venulectasias – veins 2-3 mm wide, reticular veins – veins 3-4 mm wide, varicose veins – veins wider than 4 mm, transfacial varicose veins – occur due to weakness of the communicating veins, intrafascial varicose veins – occur due to weakness of the deep veins. The prevalence of varicose veins in industrialized countries is very high. In general, numerous studies show that 1 in 22 people, or 4.5% of the total population studied, have varicose veins. The prevalence in women compared

to men is from 1.3-1 to 4.0-1 in favor of women. The prevalence of all forms of varicose veins increases with age and reaches a value of 25% in people under 30 years of age and 60% in people over 70 years of age. The prevalence is also higher in women who have been pregnant and given birth compared to those who have not given birth. A positive family history also plays a major role. The development of varicose veins in children is up to 90% if both parents have varicose veins, 62% if only the mother, 25% if only the father and up to 20% if neither parent has varicose veins. The treatment of varicose veins is multidisciplinary, but the desired effect is not always achieved. The treatment is determined according to the stage of varicose veins, initially it can be conservative, including the use of compression therapy and oral venotonics, as well as appropriate physical activity. Sclerosis of veins with the introduction of a sclerosing agent, endovenous laser ablation, endovenous radiofrequency ablation, as well as surgical treatment of veins.

Case report

An 86-year-old patient, a pensioner, comes for examination due to swelling in the right foot area, the skin is smooth and shiny, the changes are from a month ago as well as changes in the shape and structure of the toenails, complains of pain in the right leg regardless of physical activity that persists for more than a year. The patient has been on insulin therapy for DM for the last few years and previously was on oral therapy for 20 years. The patient underwent peripheral Doppler of the lower extremities to gain insight into the venous system. The deep venous system was arranged without signs of DVT. Superficial venous system: Right leg: SFJ with moderate reflux. A dilated VSM is observed in the femoral region with a diameter of 11x9.5 mm and in the crural region 8x9 mm with numerous dilated branches along the entire limb. The VSP is also dilated along its entire length 7x6.5. Perforator veins are also present in the lower middle coquette. Left leg: Minimally dilated VSM and VSP with several varicose branches along the entire length of the limb are registered. From the laboratory analyses performed, HbA1c 6.8 mmol/L (ref. value 6) the remaining values are within normal limits. In addition to compressive therapy and oral venotonics, the patient was recommended for sclerosing VSM and VSP. The slerosing was done by applying 1 ml of Embofill in a venous system placed in the proximal part of the crural region and accessing the focal part of the femoral proximal part of the VSM, and then with the Sclerosafe system 350 mm, aetoxysclerol 3% was applied from the proximal femoral to the proximal crural part of the VSM and in a second act from the proximal to the distal part of the VSM in the crural region, before starting the application, compression of the VSM was performed along the entire length for a duration of 60 seconds. After the completed intervention, an occluded VSM was monitored on a control Doppler along the entire length with a neat and passable sapheno-femoral and popliteal ostium as well as neat compressibility of the deep venous system. After one week, sclerosis of the VSP was also performed with the Sclerosafe system 350 mm with aetoxysclerol 2%. One week after the second intervention, the patient reported that he no longer had pain in his right extremity, and thus walking was easier.

Discussion

The treatment of varicose veins is complex and does not always give the desired results. It consists of several modalities, namely a conservative method that includes advice, the use of compression therapy (elastic stockings and elastic bandages), drug therapy (venotonics, capillary protectors, anticoagulants, cardiotonics, NSAIDs), physical activity and exercises, sclerosing therapy: introduction of a sclerosing agent into the lumen of the blood vessels, sclerosing with liquid agents for veins of smaller caliber, foam sclerotherapy monitored and

guided by ultrasound devices is applied to veins of larger caliber, minimally invasive methods such as EVLT, RFA, TIPP and phlebectomy, surgical treatment of veins (ligature, repair of vein segments, transplantation of vein segments, subfascial endoscopic intervention of communicating veins).

Conclusion

Risk factors for the appearance of varicose veins are numerous: hereditary factors, gender (women), age (after puberty), hormonal changes (puberty, pregnancy, menopause), hormone therapy, oral contraceptives, obesity, increased pressure on the veins in the pelvis (pregnancy, abdominal tumors), injuries and inflammatory processes of the pelvis, reduced physical activity, irregular bowel movements, professions related to long standing in the same position, professions related to long sitting in the same position, wearing tight shoes, wearing high-heeled shoes, smoking cigarettes, long-term exposure of the legs to heat, excessive sunbathing, long-term driving, fractures and injuries to the legs, surgical interventions on the legs and others, hence the need for their prevention or, if they exist, to repair them while they are still in an early stage.

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