**Rare course of thrombophlebitis of the superficial veins of the lower extremities**

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Chronic lower extremity vein disease affects more than 35% of working–age people and more than 50% of people of retirement age [1]. Approximately 2% of healthcare expenditures in the United States are spent on treating patients with chronic venous insufficiency. In Ukraine, 15 – 17% of the adult population has varicose veins of the lower extremities, with a frequency of 25% among women and 10% among men. In 1 – 2% of patients, varicose veins are complicated by the formation of trophic ulcers, and in 50–85% – by thrombophlebitis of superficial veins [2].

In the pathogenesis of varicose veins, special importance is attached to vertical (descending theory) and horizontal (ascending theory) venous reflux. The results of anatomical and morphological studies have confirmed that reflux begins with the valve apparatus in the upper saphenous veins and progresses downward through the great saphenous vein and its tributaries, leading to venous hypertension, vasodilation, and thinning of the venous walls, which become varicose. It has been proven that normal veins have a significantly higher number of valves than varicose veins [3]. In clinical practice, the spread of the reflex is mainly influenced by the failure of the saphenofemoral valve, which is more common. The presence of the valve apparatus in the lower saphenous vein is found in 50% of patients with ARV confirms the validity of the ascending theory of horizontal reflux [4, 5]. It is believed that the dominance of one or another reflux in the development of GDV is due to the presence of valves in the lower saphenous vein [6].

The presence of venous reflux leads to slower blood circulation, hypertension in the venous bed, gradual damage to the valves and the inner layer of the walls of the superficial veins of the lower extremities, which creates conditions for the progression of varicose veins and the occurrence of thrombophlebitis. Additional risk factors for superficial thrombophlebitis may include malignant neoplasms, pregnancy, childbirth and caesarean section, other surgical interventions that require bed rest, lower extremity injuries, thrombophilia, and long plane flights [6].

Given the above conditions and possible complications of lower extremity CRP, differential diagnosis of these conditions and purulent inflammatory diseases of the skin and subcutaneous tissue, soft tissue tumours, lymphadenitis with lymphangitis, periostitis and osteomyelitis is necessary.

In 6–44% of patients with aggravating circumstances, thrombosis of superficial veins through failed piercing veins passes to the deep vein system, which contributes to the development of venous insufficiency and progression of trophic disorders and complicates the diagnosis of thrombophlebitis, poses a threat of pulmonary embolism. The probability of such a process in thrombophlebitis against the background of varicose veins of the lower extremities is in the range of 5.6–28.0% [7].

When examining the vessels of the lower extremities, ultrasound is considered the most objective and reliable method, allowing to visualise the level of vascular compression and, accordingly, the presence or absence of blood circulation in them. The likelihood of developing pulmonary embolism, post–thrombotic disease of the lower extremities, a variety of clinical manifestations, diagnostic difficulties and the frequency of disability of patients against the background of a significant cost of treatment justify the relevance of this problem.

We present a clinical observation of a rare course of thrombophlebitis of the superficial veins of the lower extremities in order to familiarise a wide range of ultrasound, surgical and therapeutic specialists with the possibility of venous wall metaplasia, which will help to analyse their own material and avoid diagnostic errors in the future and restore the health of fellow citizens more quickly, which is very important in the context of the aggression of the Russian invaders.

Patient Zh., 69 years old, a resident of the village, in addition to physical examination, underwent standard general clinical examinations, ultrasound, puncture biopsy, histological examination of the removed tissues.

The patient was hospitalised because he complained of a neoplasm and periodic aching pain in the left popliteal region. The mass impaired the function of walking and prevented full flexion of the limb. It was established that the above complaints and mass appeared over 20 years ago, the intensi-
ty of complaints and the size of the mass gradually increased. There were periodic signs of local inflammation in this area: swelling, hyperaemia, pain, and a few years ago the patient noticed necrotic skin changes. These signs and limb dysfunction made him seek medical advice.

The patient's medical and family history was unremarkable. The patient was seen by a family doctor for coronary heart disease and lower extremity RSVD. Periodically, but not systematically, he received outpatient treatment in accordance with clinical protocols according to the Order of the Ministry of Health of Ukraine No. 1422 of 29.12.2016.

On general examination, the patient's condition is satisfactory. The skin is of normal colour. Peripheral lymph nodes are not enlarged. Vesicular breathing was heard over the lungs with a frequency of 18 per 1 min, systemic blood pressure 130/85 mm Hg, pulse 65 per 1 min, satisfactory properties. The tongue is moist, clean. The abdomen is soft, painless. Defecation and urination are not disturbed.

Examination of the lower extremities revealed that the skin of the right limb was flesh–coloured, without trophic disorders, warm to the touch. The sensitivity of the foot skin and movements in the ankle joint are not affected. Pulsation on the main arteries of both lower extremities is preserved. Dilated veins and varicose nodes along the course of the great saphenous vein (GSV), bluish–brown pigmentation and atrophy of the skin of the lower leg were found on the anterior and inner surfaces of the left limb. In the left popliteal region, there was a non-pulsating mass 72.1 × 47.7 × 35.4 mm wide by 18 mm with necrotic skin changes up to 15 mm in diameter in its distal part. Lateral to this mass, there was another 47.1 × 32.4 × 26.6 mm mass of dense–elastic consistency (Fig. 1). There were no signs of inflammation or pain on palpation of either mass.

Ultrasonography of the vessels of the left lower extremity revealed velocity and spectral characteristics of arterial circulation within the normal range, the main arteries were patent. The IVC is passable and can be traced along its entire length, its lumen is free, the walls are of normal echogenicity. Varicose dilated trunk and branches of the IRA are visualised on the inner surface of the thigh, anterior and inner surfaces of the lower leg, and lumen compression is complete. Moderate ostial valve insufficiency, the diameter of the IVC trunk in this area is 10.6 mm, in the lower third of the thigh 9.0 mm, in the ankle area 4.7 mm. On the inner surface of the lower and middle thirds of the tibia, two dilated penetrating veins of 4.6 and 5.0 mm, respectively, with signs of valvular insufficiency were visualised. The small saphenous and deep veins were patent throughout, their lumen was free, the walls were of normal echogenicity, the velocity and spectral characteristics of blood circulation were within normal limits, and the lumen compression was complete. There are no signs of valvular insufficiency. Ultrasound signs correspond to varicose veins of the saphenous veins of the left lower extremity.

Soft tissue ultrasonography in the left popliteal region reveals a subcutaneously located 72.1 × 47.7 × 35.4 mm volumetric mass of irregular shape, with a clear uneven contour and pronounced multidirectional internal circulation, which visually resembles a conglomerate of vessels. When compressed by the transducer, the mass shrinks and is painless. Lateral to it, an additional mass 47.1 × 32.4 × 26.6 mm in size, oval in shape, with a clear, even contour, heterogeneous structure due to areas of increased and decreased echogenicity is visualised (Fig. 2). Doppler Doppler showed blood flow in the periphery in the form of single coloured loci.

Fig. 1.
A neoplasm of the popliteal region.

Fig. 2.
Ultrasonography of a neoplasm of the popliteal region.
After complete clinical and laboratory tests, the lesion was punctured and a small amount of thick brownish content was obtained. The biopsy aspirate was sent for rapid cytological examination. No malignant cells were found in the cytomorphological laboratory. The preliminary diagnosis was a soft tissue vascular tumour.

The patient underwent a left-sided phlebectomy according to Babcock–Narath, excision of two neoplasms of the popliteal region. Intraoperatively, it was found that the lesions consisted of a conglomerate of thrombotic masses, varicose, enlarged and partially sclerotic saphenous veins (Fig. 3).

The morphological picture of the specimen is diverse, indicating the long-standing and chronic course of the pathological process. Transformation to mature fibrous tissue is detected, with capillaries and arterioles of varying degrees of maturity. There is a proliferation of blood vessels in the capillaries, which form lobules bounded by connective tissue. There are mitotic patterns of the stroma, which are narrowing and contain foci of inflammatory infiltrate of a mixed type with a predominance of monocytes (Fig. 4). There are places of active remodelling, where the neoplasm is histologically indistinguishable from a mature capillary haemangioma with signs of chronic inflammation and gives reason to consider this form of venous disease as precancerous.

In order to prevent further metaplasia of areas of limited thrombophlebitis, patients with similar ultrasonographic and morphological changes are indicated for surgical intervention such as phlebectomy and removal of neoplasms in accordance with oncological principles.

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**References**


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