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КЛИНИЧЕСКАЯ КАТЕГОРИЗАЦИЯ ВАРИКОЗНОГО РАСШИРЕНИЯ ВЕН И РЕЗУЛЬТАТЫ ИХ ХИРУРГИЧЕСКОГО ЛЕЧЕНИЯ В ЗАВИСИМОСТИ ОТ СЛОЖНОСТИ ОПЕРАЦИИ

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CLINICAL CATEGORIZATION OF VARICOSE VEINS AND THEIR SURGICAL OUTCOMES RELATIVE TO OPERATION COMPLEXITY

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Резюме. В данном исследовании изучается распространенность варикозных вен и результаты хирургического лечения в зависимости от сложности процедуры. Проведен ретроспективный анализ 187 пациентов, перенесших операцию в 2025 году. Обсуждается классификация варикозных вен по системе CEAP, методы хирургического воздействия, их эффективность и особенности применения в зависимости от клинической тяжести заболевания.

Ключевые слова: варикозные вены, CEAP, хирургические методы, эндовенозная лазерная терапия, радиочастотная абляция.

Resume. This case study examines the prevalence of varicose veins and surgical treatment outcomes depending on the complexity of the procedure. A retrospective analysis of 187 patients who underwent surgery in 2025 was conducted. The CEAP classification of varicose veins, surgical techniques, their effectiveness, and specific applications depending on the clinical severity of the disease are discussed.

Keywords: varicose veins, CEAP, surgical methods, endovenous laser therapy, radiofrequency ablation.

Relevance. Varicose veins are veins that get enlarged and twisted and usually appear in the legs. This happens because of poor functioning of valves in veins, leading to blood accumulation and increased pressure [1, 2]. Doctors use a system called CEAP to classify them according to their severity, clinically ranging from C1 to C6. C1 represents small spider or reticular veins, C2 represents actual varicose veins, C3 represents swelling of legs, C4 represents changes in the skin such as discoloration or eczema, C5 represents a healed ulcer, and C6 represents a venous ulcer. In the case of varicose vein surgery, vein stripping removes the veins using small cuts, but newer methods involve using heat to close the veins, such as endovenous laser treatment (EVLT) and radiofrequency ablation (RFA). The choice of option will depend on the gravity of the condition.

Aim: to analyze the distribution of varicose veins across different clinical categories and evaluate the surgical outcomes relative to the complexity of the procedures performed.

Objectives:

1. To analyse the distribution and prevalence of varicose veins across different

clinical categories classified by the CEAP system in patients undergoing surgery.

2. To evaluate the correlation between the complexity of surgical procedures and the extent of varicose vein involvement at various anatomical sites.

3. To assess the surgical outcomes and effectiveness of different operative techniques relative to the severity of varicose veins, emphasizing the importance of individualized treatment approaches.

Materials and methods. The retrospective study analyzed 187 patients who underwent Varicose Vein surgery in 2025 year at 3rd City Clinical Hospital. The clinical categorization, operation type, protocol, techniques were examined. All studies were conducted in compliance with biomedical ethics (maintaining medical confidentiality, confidentiality of information).

Results and their discussion. The study included 187 patients between the ages of 22 and 79 years. The patients included 72 men (38.5%), and 115 women (61.5%). The surgeries included simple, complex, and high-tech surgeries. For the simple surgeries 37 men (43.5%) and 48 women (56.5%), for the complex surgeries 31 men (36.0%) and 55 women (64.0%), for the high-tech surgeries 4 men (25.0%) and 12 women (75.0%) were included in the study. For all the surgeries, 72 procedures were planned for the men, and there were no emergency cases. For the women, 112 cases were planned, and 3 (1.60%) cases were emergency cases (fig. 1).

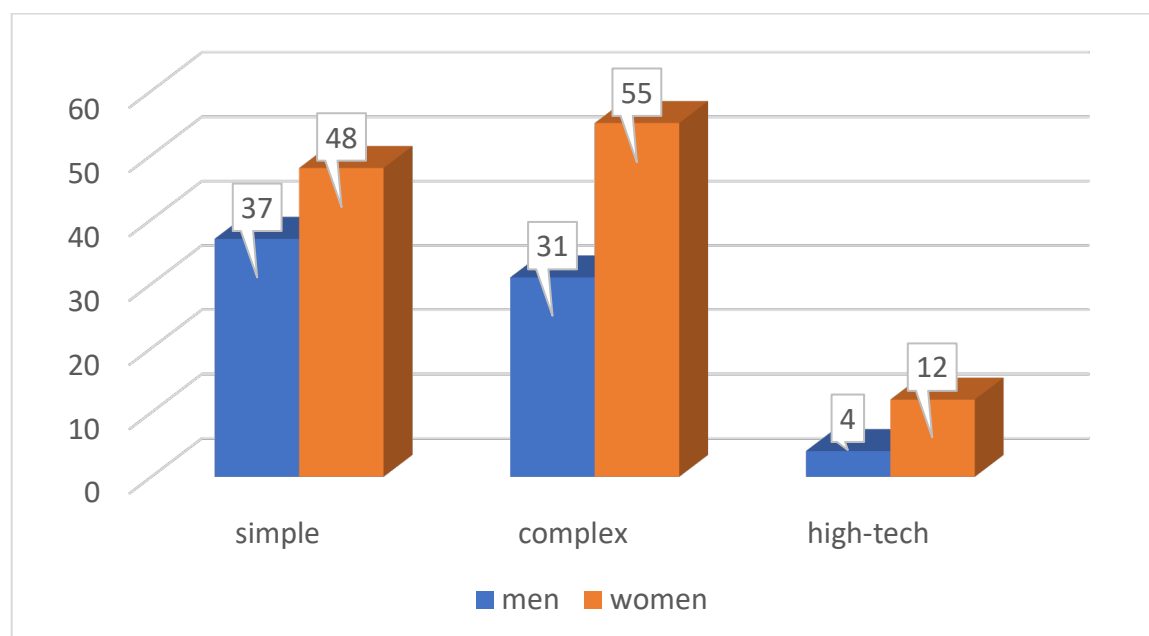


Fig. 1 – Surgery types distribution by gender

Phlebectomy was carried out in 85 patients, accounting for 45.5%. A combined approach was used in 86 patients (46.0%), while laser surgery was used in 16 patients (8.6%). Varicose veins were most commonly found at the left C2 level in 46 patients (16 men, 30 women), accounting for 24.60%. The second most common was the right C2 level, with 35 patients, followed by significant findings at the left C3 level in 34 patients and at the right C3 level in 33 patients. Combined involvement of veins at different levels was not significant, with the highest incidence at the right C4 and left C3 levels in 7 patients (3.7%), while the lowest incidence was at the right C4 and left C5 levels in 1

patient each (0.5%).

The methods employed were the following: Bobcock stripping in 96 patients (51.4%), crossectomy with SFJ ligation in 106 patients (56.7%), miniphlebectomy using Varadi/Narat techniques in 115 patients (61.5%), perforator ligation in 88 patients (47.1%), and EVLT using a radial fiber in 71 patients (38.0%). Tumescant anesthesia and ultrasound were each used in 71 cases, again corresponding to 38.0%.

Conclusions:

1. Most patients were women (61.5%), Most had varicose veins on the left side at the C2 level.

2. Most patients had undergone simple or more complex operations, with miniphlebectomy (61.5%) and combined techniques (46.0%) being the most popular.

3. There is a clear inclination towards using less complex techniques, Other techniques, such as Bobcock stripping, crossectomy, and EVLT, were used depending on the degree of varicose veins.

4. The high rate of planned surgeries (98.4%) and low rate of emergencies (1.6%) suggest that there is good preoperative planning.

5. The study shows that more complex operations have more widespread varicose veins. This is true in relation to certain anatomical sites, this shows that individualization of treatment is essential in varicose veins.

Literature

1. S2k guidelines: diagnosis and treatment of varicose veins / F. Pannier, T. Noppeney, J. Alm et al. // *Der Hautarzt*. – 2022. – Vol. 73 (S1). – P. 1–44. – DOI: 10.1007/s00105-022-04977-8.

2. Antani, M. R. *Varicose veins*. / M. R. Antani, J. B. Dattilo // StatPearls Publishing. – 2023. – NBK470194.