

FACTORS OF INFLUENCE OF DEEP VENOUS THROMBOSIS

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Abstract

If in the first plan to carry out a surgical operation there are the benefits to be gained by improving the health of the patient, it must not be omitted the risks. The risks are likely multiple and they should be considered by the surgeon and explained to the patient. The venous risk in surgical pathology is defined primarily by the occurrence of deep venous thrombosis.

Key words: deep venous thrombosis, surgery

INTRODUCTION

Deep venous thrombosis (DVT) is clotting of blood in a deep vein of an extremity (usually calf or thigh) or the pelvis. DVT is the primary cause of pulmonary embolism.

DVT results from conditions that impair venous return, lead to endothelial injury or dysfunction, or cause hypercoagulability. DVT occurs most commonly occurs in the lower extremities, or pelvis.

DVT may be asymptomatic or cause pain and swelling in an extremity. Diagnosis is by history, physical examination, and duplex ultrasonography, with D-dimmer or other testing as necessary.

Treatment is with anticoagulants. Prognosis is generally good with prompt, adequate treatment; common long-term complications include venous insufficiency with or without postphlebotic syndrome.

MATERIAL AND METHODS

The study is based on the following database:

- archive of Oradea Emergency County Hospital,
- archive of Obstetrics and Gynecology Hospital Oradea,
- medical files,
- laboratory results.

The methods used to establish the results were: observation and measurement of phenomena; comparing, statistical study; evaluation of morbidity in mass by epidemiological method.

RESULTS AND DISCUSSIONS

During the years 2004-2009, the Oradea Emergency County Hospital there were performed 36,902 surgical interventions, most of which are included within general surgery. The types and number of surgeries performed are given in Fig. 1.

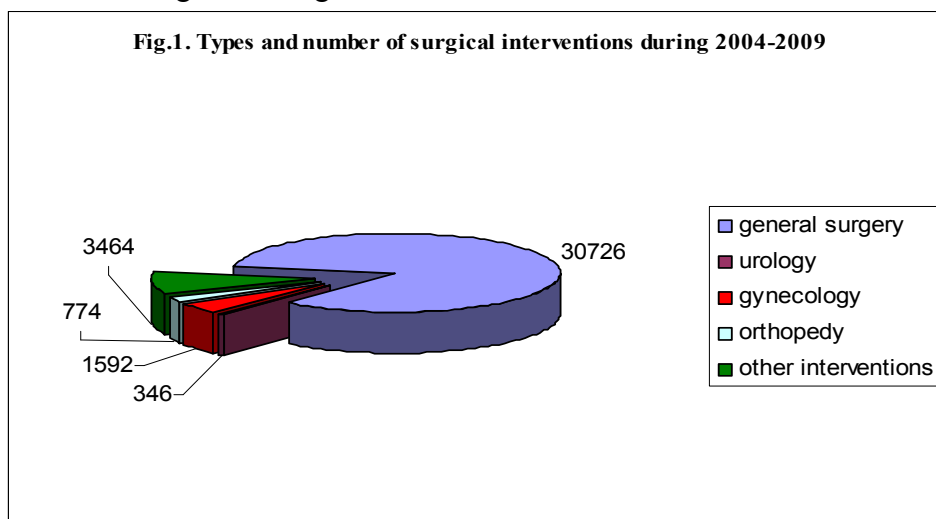


Fig.1. Types and number of surgical interventions (2004-2009)

In the same period (01.01.2004-31.01.2009) there were 44,813 patients hospitalized in Oradea Emergency County Hospital, and 13,229 of them on surgical wards.

Following surgery, 145 surgical cases have resulted in venous complications: phlebitis and thrombophlebitis. Percentage recorded a 1.19% rate of complications of venous origin for surgery.

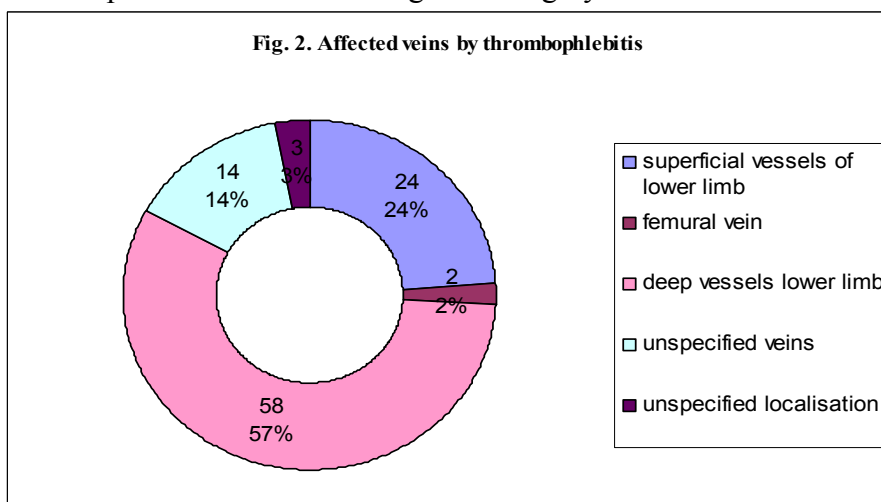


Fig.2. Affected veins by thrombophlebitis

According to Fig. 3 it is clear that venous thrombosis is a complication more common in women, with a sex ratio of ♂: ♀ = 1:3,4.

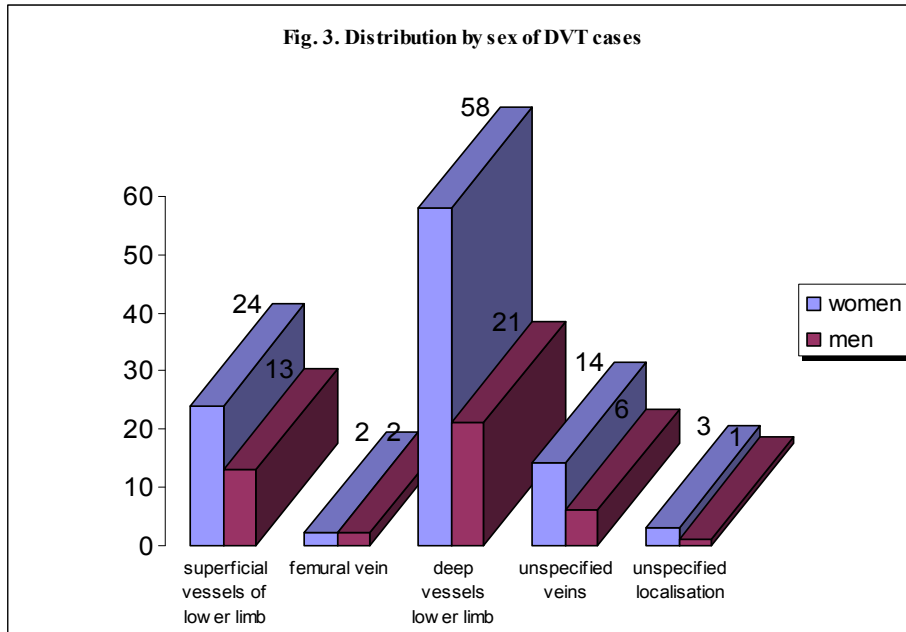


Fig.3. Distribution by sex of DTV cases

Regarding the origins, most patients who developed venous thrombosis are from urban areas. (fig.4)

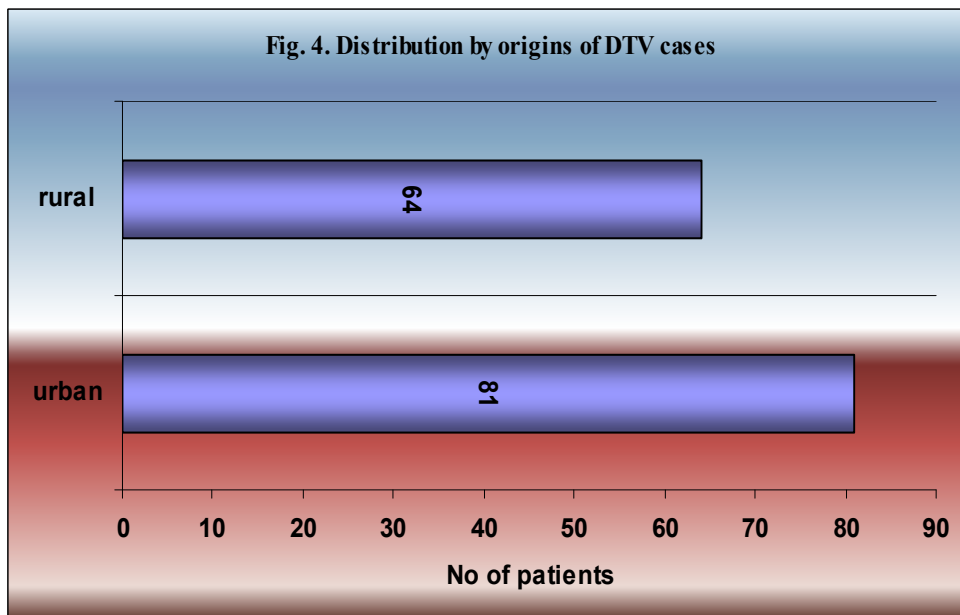


Fig.4. Distribution by origins of DTV cases

As regards distribution by age, it was observed that: 6 patients were between 15-24 years old, 9 patients were between 25-34 years old, 24 patients were between 35-44 years old, 39 patients were between 45-54 years old, 28 patients 55-64 years old, 21 patients between 65-74 years old, 18 patients were over 75 years old.

Studying the archive of Obstetrics and Gynecology Hospital Oradea shows a total of 93 cases of venous thrombosis in women with gynecological problems, pregnant women or women that have recently given birth, cumulative within 01.01.2004-01.01.2009.

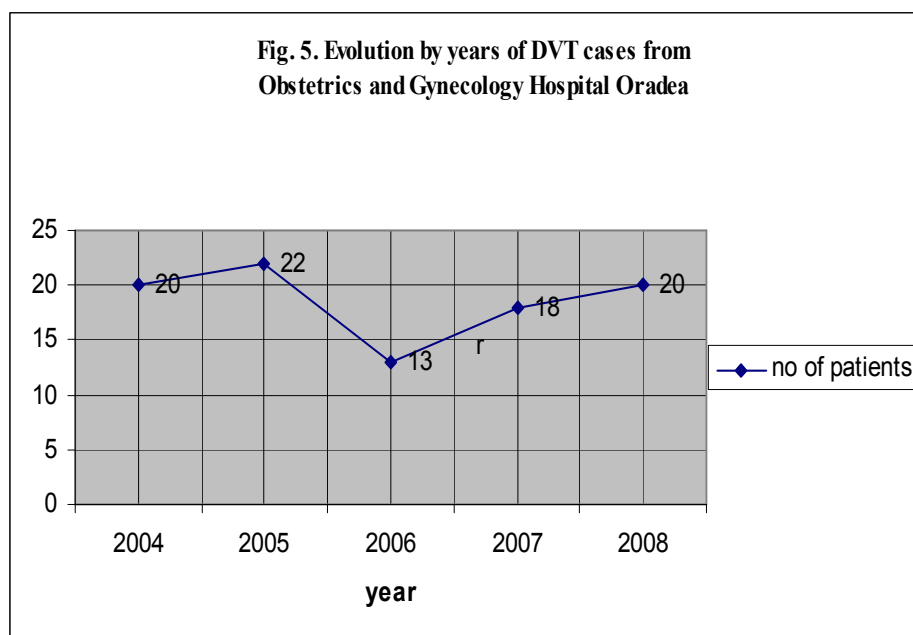


Fig.5. Evolution by years of DTV cases

The main cause of venous thrombosis in women hospitalized in Obstetrics and Gynecology Hospital was the pregnancy, especially after the 30th week. Pathological basis that has triggered deep vein thrombosis in patients evaluated is given in Fig.6.

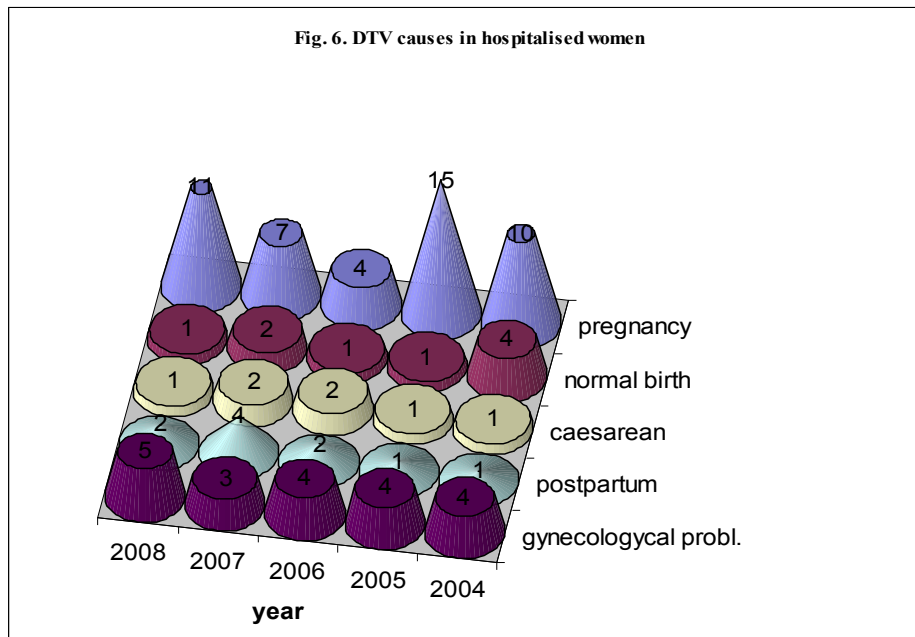


Fig.6. DTV cases in hospitalised women

In the assessed pregnancy cases it occurred personal pathological history favorable for venous thrombosis in 34 of 47 patients (diabetes-5, obesity-4, varicose-6, gynecological infections-3, venous thrombosis-9, caesarean-5, urological disorders-2).

CONCLUSIONS

In Oradea County Hospital there have been performed 36,902 surgical interventions, and 1.19% of them were followed by venous complications: vein thrombosis or pulmonary embolism.

Surgery that has highest venous risk is general surgery or gynecology.

The most frequently affected by deep vein thrombosis are vessels of the lower limbs.

In terms of personal data at greater risk of venous thrombosis is recorded in: females (sex ratio of ♂: ♀ = 1:3,4), people in urban (56%).

The risk of venous thrombosis increases with age, reaching a peak in the 5th and 6th decade of life.

The venous risk is dependent by physiological history: pregnancy. In terms of pathological history: 72% of patients from Obstetrics and Gynecology Hospital had pathological history, the most common was another episode of thrombosis, varicose veins, birth by caesarean section, diabetes or obesity.

RECOMMENDATIONS

Patients at low risk of DVT (those who are undergoing minor surgery but have no clinical risk factors for DVT; those who must be temporarily inactive for long periods) should be encouraged to walk or otherwise move their legs periodically; no medical treatment is needed. Dorsiflexion 10 times/h is probably sufficient.

Patients at higher risk of DVT (those undergoing minor surgery if they have clinical risk factors for DVT; those undergoing major surgery, especially orthopedic surgery, even without risk factors; bed bound patients with major medical illnesses) require additional preventive treatment. Most of these patients can be identified and should receive thrombosis prophylaxis.

After surgery, elevating the legs and avoiding sitting in chairs (which, by placing the legs in a dependent position, impedes venous return) can help. Additional treatment may involve low-dose of warfarin, newer anticoagulants such as fondaparinux, compression devices or stockings, or a combination, depending on patient's risk level, type of surgery (if applicable), projected duration of preventive treatment, contraindications, adverse effects, relative cost, ease of use, and local practice.

REFERENCES

1. Alikhan R., A.T. Cohen, S Combe, M.M Samama., L. Desjardins, A. Eldor, et al., 2004, Risk factors for venous thromboembolism in hospitalized patients with acute medical illness: analysis of the MEDENOX Study. Arch Intern Med.; 164(9):963-8. [Medline].
2. Ancăr V., C. Ionescu, 2005, Ginecologie, Ed. Național, București.
3. Angelescu N., 2001, Tratat de patologie chirurgicală, Editura Medicală, București, Vol. I și II,
4. Bulger C.M., C. Jacobs, N.H. Patel ., 2004, Epidemiology of acute deep vein thrombosis. Tech Vasc Interv Radiol.;7(2):50-4
5. Marcu A., 2002, Metode utilizate în monitorizarea stării de sănătate, Institutul de Sănătate Publică, București.
6. Schwartz S. I. , G. Shires, 2005, Principiile chirurgiei, Ed. Teora, București Vol I. Ediția I în limba română,
7. Snow V., A. Qaseem, P. Barry, et al., 2007, Management of venous thromboembolism: a clinical practice guideline from the American College of Physicians and the American Academy of Family Physicians. Ann Intern Med.;146(3):204-10. Epub
8. Vârtej P., 2007, Ginecologie, Editura All, București,
9. <http://www.merck.com/mmpe/sec07/ch081/ch081b.html>
10. www.Thrombosisadviser.com