

EPIDEMIOLOGICAL STUDY REGARDING THE INCIDENCE OF VENOUS THROMBOSIS

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Abstract

Venous thrombosis is an important complication that may occur during or after surgery. For this reason, the proposed of the study is to identify the recorded cases of venous thrombosis in the past five years, at the Emergency Clinical Hospital Oradea. Most such cases have been identified as women aged over 45 years.

Key words: venous thrombosis, incidence, risk, patient

INTRODUCTION

Research in the field of surgery indicates that the exact incidence of venous thrombosis is unknown because most studies are limited by the inherent lack of accuracy of clinical diagnosis. Important in this regard is the fact that many cases of venous thrombosis are occult or usually resolve spontaneously without complications. Existing data underestimates the true incidence of venous thrombosis, suggesting that approximately 80 cases per 100,000 people occur each year.

MATERIAL AND METHODS

We performed a retrospective study, on a total of 145 patients diagnosed with venous thrombosis, hospitalized on the surgical wards of the County Emergency Clinical Hospital Oradea.

Research period is extended to five years, in the range 01/01/2005 to 12/31/2009.

The study used the archive to the Emergency Clinical Hospital Oradea, respectively computerized database unit.

Anamnestic and identification data of patients, from the observation sheets, were used.

The research method used was the statistical study, which included: determining the odds ratio (with a confidence interval 95%), chi square test and Fisher test (for determining the degree of significance). Data processing was done using Microsoft Office Excel 2003.

Representation of the results was performed using graphs and tables.

RESULTS AND DISCUSSION

In the period 01/01/2005 to 12/31/2009, 44,813 patients were hospitalized across the whole Emergency Clinical Hospital Oradea, of which 13 229 on surgical wards.

It was observed that the percentage hospitalized patients on surgical wards accounted for 29.5% of all patients admitted in Emergency Hospital Oradea. So, during the last 5 years, patients hospitalized on surgical wards were a third of all admissions.

After consulting the archives, there have been identified 145 cases diagnosed with venous thrombosis - com complications appeared in patients who have undergone previous surgery.

Compared to the total number of interventions, the rate of venous complications resulting intervention is 0.43%.

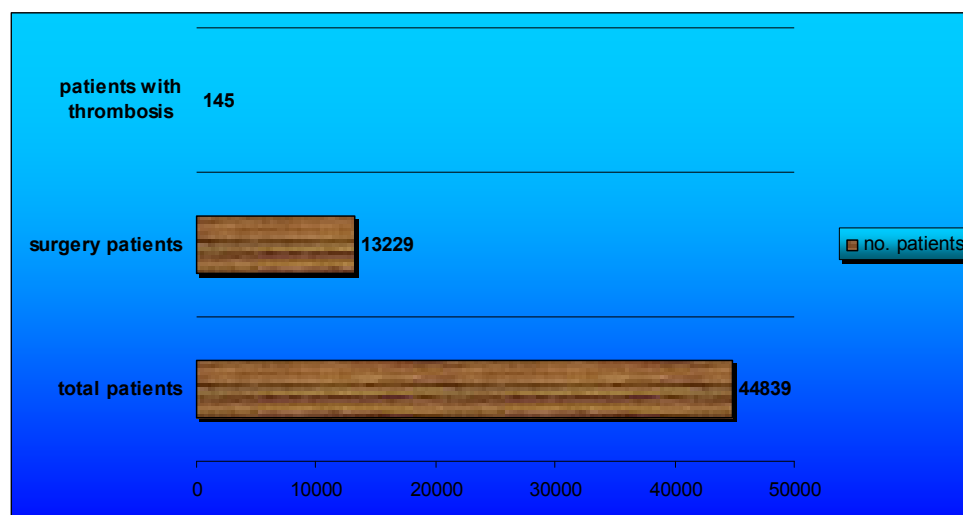


Fig.1. Incidence of venous thrombosis compared to the total number of patients

Since the County Emergency Clinical Hospital Oradea is the basic unit of Bihor county sanitary system, the number and kind of surgery practiced is wide and diverse, as shown in table 1.

Table 1

The nature of surgical interventions in the Emergency Clinical Hospital Oradea, from 01/01/2005 to 01/31/2009

No.	Surgical area	No. of interventions	Percent
1.	General surgery	27262	81,52%
2.	Urology	2078	6,23%
3.	Gynecology	1592	4,76%
4.	Orthopedics	2506	7,49%
	Total	33438	100%

The assessment by surgical specialties identifies that the vast majority of cases are provided by the general surgery, so from a total of 33,438 interventions, general surgery interventions assigned 27,262 (81.52%). Number of interventions in the field of urology is 2078 (6.23%) and the orthopedic interventions are 2506 (7.49%).

Regarding the distribution of cases by year, it is shown in fig. 2. According to the diagram we see a growing trend for venous thrombosis with a share of 40.68% for 2009.

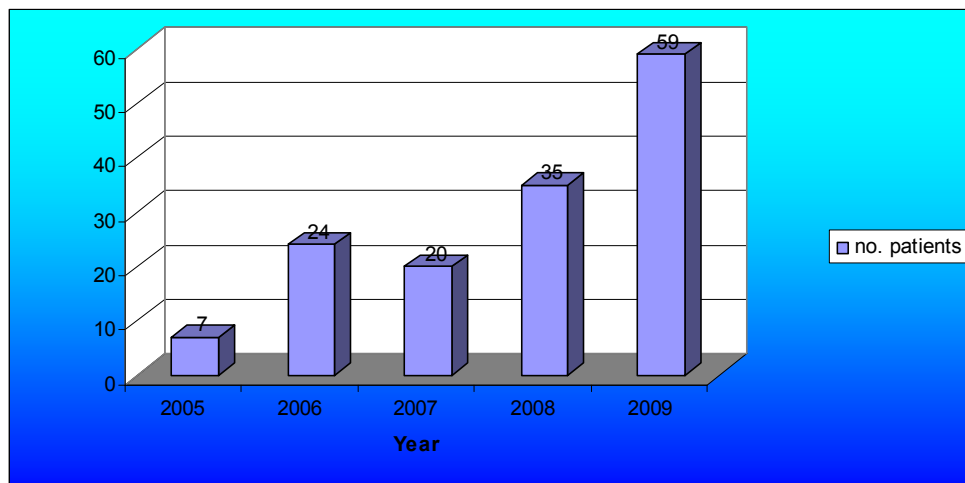


Fig.2. The repartition of venous thrombosis cases by year

Regarding the incidence of venous thrombosis, according to fig.3, it is clear that venous thrombosis is a complication more common in women with a sex ratio of ♂: ♀ = 1:2.3.

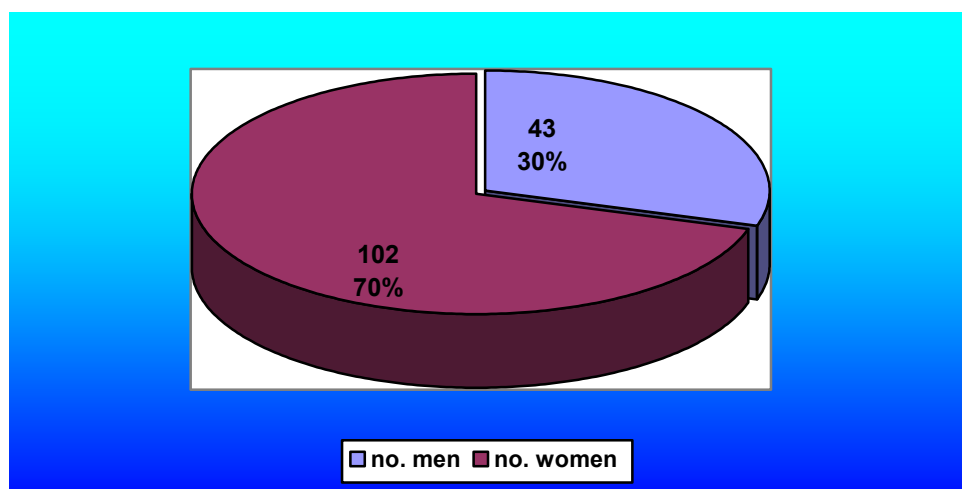


Fig.3. The repartition of venous thrombosis cases by gender

These differences may be explained by more numerous thrombotic risk factors in women: venous insufficiency, obesity, interventions in the genital area, hormone replacement therapy or contraceptives.

In terms of environmental origin, most patients (55.86%) who developed venous thrombosis are from urban areas. (fig. 4).

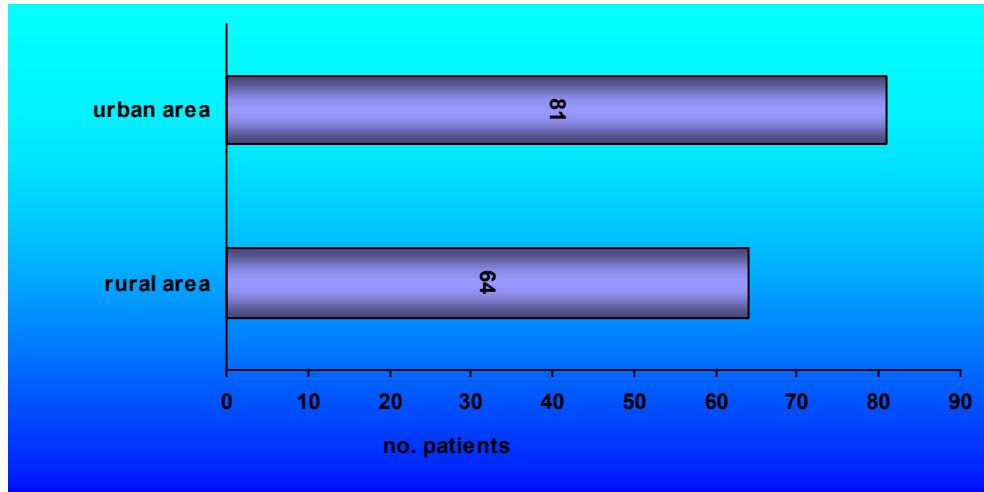


Fig.4. The repartition of venous thrombosis cases by area

Studying the cases of venous thrombosis in the Emergency Clinical Hospital Oradea indicates that venous thrombosis incidence is highest between 45-54 years of age. Total venous thrombosis patients aged over 45 years is 106 (73.10%) (fig.5). The average ages of patients with venous thrombosis is 54 years.

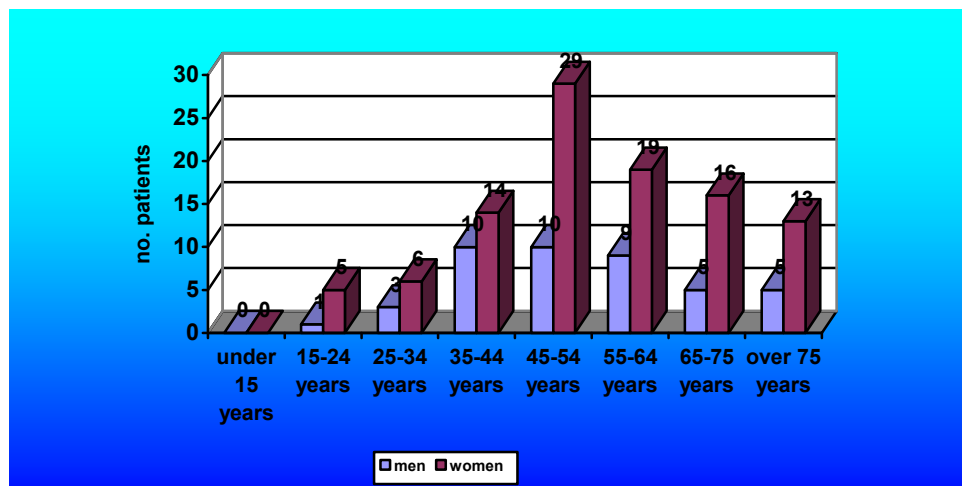


Fig.5. The repartition of venous thrombosis cases by age and gender

Table 2

Reporting the number of patients with venous thrombosis to the total number of patients on surgical wards (based on gender and age)

Gender	Age	<45 years	>45 years	Total
Men	+ TV	14	29	43
	- TV	1516	4777	6293
	Total	1530	4806	6336
Women	+ TV	25	77	102
	- TV	1636	5155	6791
	Total	1661	5232	6893

Table 3

Risk of venous thrombosis by age and gender

Indices	χ^2	p	Odds Ratio	95% confidence interval	
				Lower limit	Higher limit
Age >45 y/ <45 y	0,60	0,43	0.864	0.5973	1.2499
Sex F/ sex M	19,54	<0,001	2,33	1.637	3.3364

Studying the distribution by sex (tables 2 and 3), we found that venous thrombosis is more prevalent in women, about 2.33 times higher risk of venous thrombosis women make compared with men ($p < 0.001$ - highly significant).

Statistical calculations do not indicate a connection between the incidence of venous thrombosis and age, however it can not be overlooked that most patients are over 45 years (73.10%). Getting older increases comorbidities, which are predisposing factors for venous thrombosis.

The average age of men who have one episode of venous thrombosis is 66 years and women 72 years (M. Nordström, 1992).

Marc D. Silverstein (1998) reveals that the incidence of venous thrombosis increases with age, being lower for persons under 55 years and higher in those over 60 years.

The study of risk factors of venous thromboembolism in surgical pathology conducted at UMF Craiova Craiova Surgical Clinic (St. Ghelase. M et al., 2008) followed 10 653 patients. After conducting this study it was concluded that gender as a risk factor showed an increased incidence in women (69.33%) than men (30.66%). Also 67% of the patients were from urban area and 34% of them had origin in the rural areas.

CONCLUSIONS

In the case study that we conducted, venous thrombosis incidence is 23 per 100,000 and 0.43% of the number of hospital surgical wards.

Compared to years, the number of cases follows a progressive trend, the share of the 2009 cases of venous thrombosis was 40.68%.

Deep vein thrombosis is a complication more common in women, with a sex ratio of ♂: ♀ = 1:2.3.

In terms of environmental origin, most patients (55.86%) who developed venous thrombosis are from urban areas.

Average age for highest venous thrombosis incidence is between 45-54 years.

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