Venous thromboembolism: incidence and survival in patients with gynecological cancer

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INTRODUCTION

Venous thromboembolism (VTE), which comprises deep vein thrombosis (DVT) and pulmonary embolism (PE), is a frequent clinical event in patients with cancer (STREIFF, 2009). It is a multifactorial disease (CONNOLLY et al, 2013; RENNI; 2013), which can lead to a significant increase in mortality (KHORANA et al, 2006) and have a considerable impact on the quality of life (NOBLE et al, 2010; WELLS et al, 2014). Studies have shown a great association between gynecological cancer and VTE. However, there is still a lack of large studies approaching this group of patients, exclusively.

Therefore, the purpose of this study is to analyze the incidence of DVT and PE its impact on the prognosis of patients with gynecological cancer.

METHODS

This is a cohort study with retrospective data collection. Patients admitted at the Cancer Hospital II (HC II) in the period of January 2008 to July 2015, with cervical, endometrium, ovary, vagina and vulva neoplasms and who have undergone examination for the detection of DVT or PE, according to the institutional protocol, were included. This project was approved by the INCA's Ethics Committee, under the number: CAAE 41285015.5.0000.5274.

PRELIMINARY RESULTS

In this study, 1885 women who underwent at least one examination for VTE investigation were included. About the sociodemographic characteristics of these women, the mean age was 55 years (SD ± 13,8), the majority of the women had white skin color (54,7%), had no partner (57,9%), was resident in the state of Rio de Janeiro (99,6%), 48% of the women had a family history of cancer, were not alcoholics (84,6%) and no smokers (58,1%)

Cervical neoplasia (56,6%) and carcinoma (53,2%) were the most prevalent topography in the population. About clinical stages, III and IV totaled more than 50% of the cases (Table 1).

Table 1. Clinical and treatment-related characteristics (N= 1885)

Variable	N	%
Topography		
Cervical	1072	56,9
Endometrium	398	21,1
Ovary	328	17,4
Vulva	67	3,6
Vagina	20	1,1
Histological type		
Carcinoma	1002	53,2
Adenocarcinoma	726	38,5
Cystadenocarcinoma	105	5,6
Cancer not especified	52	2,8
Clinical stage		
I	379	20,1
II	454	24,1
III	704	37,3
IV	305	16,2
Missing	43	2,3
Treatment		
Yes	1598	84,7
No	288	15,3
Surgery		
Yes	643	34,1
No	954	50,6
Did not receive treatment	288	15,3

Among the 1885 patients, 1598 (84,7%) received some type of cancer treatment. The combination of chemotherapy and radiotherapy was the therapeutic modality most used, representing 33,1% .

Regarding the occurrence of VTE, 769 (40,8%), women had, at least, one thromboembolic event (table 2). Concerning the distribution of VTE by primary cancer site, there was no statistically significant difference (p=0.940).

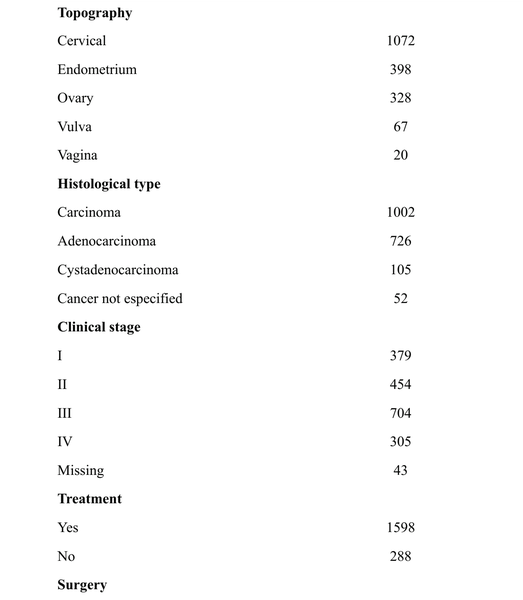

Figure 1. Distribution of VTE by tumor topography

Table 2. Frequency of venous thromboembolism in the study population (N= 1885)

Variable	N	%
VTE		
Yes	769	40,8
No	1116	59,2
DVT		
Yes	762	40,4
No	1123	59,6
PE		
Yes	24	1,3
No	1861	98,7

In relation to the chance of developing VTE related to clinical staging, when compared to stage I patients, stage II had a 81% higher chance of developing VTE (95% CI 1,36 – 2,42), stage III had a 74% greater chance (95% CI 1,33 – 2,27) and stage IV had 113% greater chance more chance of developing VTE (95% CI 1,56 – 2,92. Most women (74.1%), evolved to death (Table 3). In the crude analysis of overall survival, a statistically significant difference (p <0.001) was found, and it was observed that patients who did not develop VTE presented a median survival of 38.7 months (95% CI 34.95 - 42.55) and who developed VTE presented 20.6 months (95% CI 18.43 - 22.84).

Table 3. Thromboembolic event chance from clinical staging and age

Caracteristics	Thromboembolic event			
	Yes	No	OR (CI 95%)	P value
Clinical Staging				
I	112 (29,6%)	267 (70,4%)	1,00	
II	196 (43,2%)	258 (56,8%)	1,81 (1,36 – 2,42)	< 0,001
III	297 (47,2%)	407 (52,8%)	1,74 (1,33 – 2,27)	< 0,001
IV	144 (47,2%)	161 (52,8%)	2,13 (1,56 – 2,92)	< 0,001

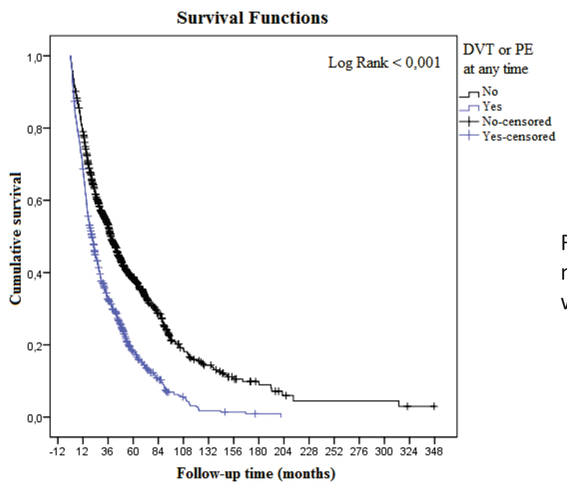

Figure 2. Difference in survival (in months) between patients with and without thromboembolic event

CURRENT STAGE

The adjusted analyzes are being performed to verify the factors associated with the incidence of VTE and the factors associated with the survival of patients with VTE and gynecological neoplasm.

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