

암재활

게시일시 및 장소 : 10 월 18 일(금) 08:30-12:20 Room G(3F)

질의응답 일시 및 장소 : 10 월 18 일(금) 10:00-10:45 Room G(3F)

P 1-80

Isolated Suprainguinal Deep Vein Thrombosis in Gynecologic Cancer Patients

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OBJECTIVE

Lower extremity (LE) edema is a common complication in gynecologic cancer patients. There are two main cause of edema in these patients, lymphedema and deep vein thrombosis (DVT). Early diagnosis and treatment of DVT are certainly important, but it is often difficult to evaluate proximal DVT by using ultrasound. The aim of this study is to recognize the prevalence of proximal DVT and to investigate factors to predict deep vein thrombosis in gynecologic cancer patients.

METHODS

This study was designed as a retrospective study. We collected information from medical chart review. We screened 633 gynecologic cancer patients who referred to the department of rehabilitation medicine for lower extremity edema from January 2007 to December 2018. Among them, 426 patients who evaluated CTA or CTV LEx were recruited. We evaluated the following: type of malignancy, level of d-dimer, body mass index, regional lymph node involvement, distal organ metastasis, duration of malignancy, comorbidities, history of chemotherapy, radiation therapy, surgery, a difference of circumference at above suprapatella 10cm and below infrapatella 10cm between both extremities. We analyzed each factor that correlated with the frequency of DVT. In DVT patients, the location of thrombosis was evaluated, too.

RESULTS

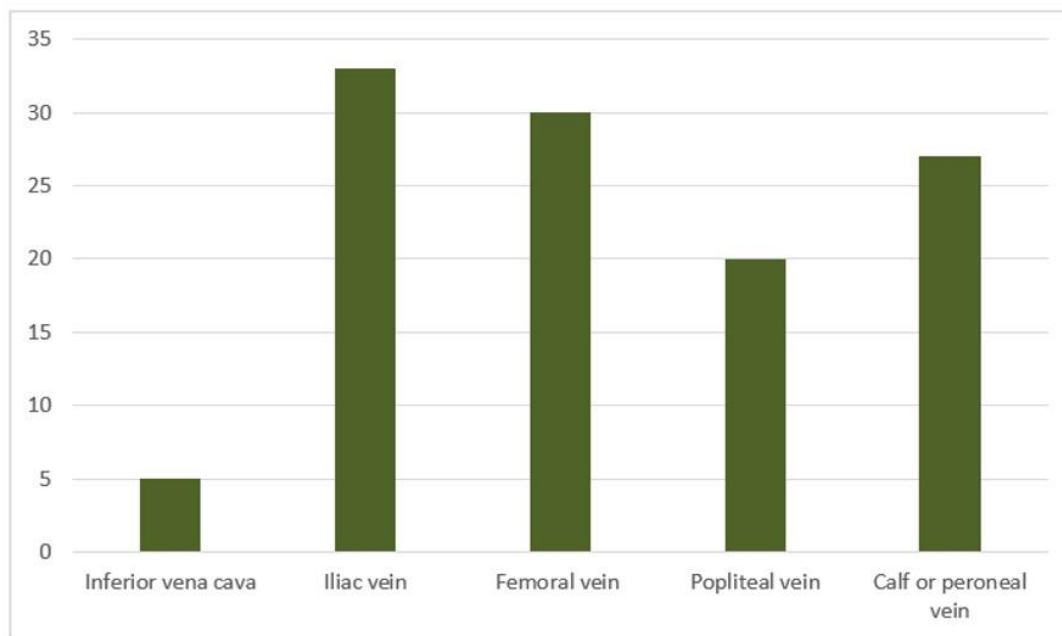
Sixty-one patients were diagnosed with deep vein thrombosis and 365 patients were not. The clinical characteristics of the patients were listed in Table 1. Figure 1 indicated that the location of DVT in DVT groups. Five patients have thrombosis in IVC, 33 patients have thrombosis in an iliac vein (common iliac and external iliac vein), 30 patients have thrombosis in the femoral vein, 20 patients have thrombosis in the popliteal vein, and 27 patients have thrombosis in the calf, peroneal or muscular vein. Twenty-eight patients have thrombosis in only proximal vein such as IVC and iliac vein. In these patients, Incidence of pulmonary embolism was significantly higher ($p=0.03$). Relationships between each factor and DVT were shown in Table 2. There was no correlation with the

type of treatment such as radiotherapy, and surgery, comorbidities, above 10cm and below 10cm circumference. However, DVT group showed higher proportion patients with metastasis to a distal organ (52.5% vs 33.8%, $p<0.00$) and regional lymph node metastasis (55.0% vs 25.3%, $p<0.00$) than the non-DVT group.

CONCLUSION

In our study, many of gynecologic cancer patients have proximal DVT, and the proportion of diagnosed with pulmonary embolism is higher in proximal DVT patients. In addition, regional lymph node metastasis, distal organ metastasis, and higher d-dimer are associated with the incidence of deep vein thrombosis. In high-risk gynecologic cancer patients, CTA or CTV LEx is a useful tool for diagnosing DVT.

Fig 1. Location of thrombosis in DVT group



Values are number of patients, DVT; deep vein thrombosis

Fig 1. Location of thrombosis in DVT group

Table 1. Characteristics of subjects

	DVT group (n = 61)	Non-DVT group (n = 365)	p-value
Age (years)	56.9 ± 11.3	55.9 ± 11.8	.67
Height (cm)	155 ± 7.0	156.7 ± 6.5	.30
Body weight (kg)	57.5 ± 9.6	60.6 ± 10.6	.10
Body mass index (kg/m ²)	23.8 ± 3.8	24.7 ± 4.0	.21
Type of malignancy			.35
Cervical cancer	22 (36.1%)	174 (47.7%)	
Endometrial cancer	20 (32.8%)	89 (24.4%)	
Ovarian cancer	18 (29.5%)	99 (27.1%)	
Others	1 (1.6%)	3 (0.8%)	
Stage			
IV	32 (52.5%)	69 (18.9%)	<.00*
Disease duration (months)	55.4 ± 75.8	86.1 ± 290.1	.27

Values are the mean ± SD or number (%); DVT; deep vein thrombosis, *p<0.05, For statistical analysis, Chi-square test and Mann-whitney U test were performed.

Table 2. Relating factors for DVT

	DVT group (n = 61)	Non-DVT group (n = 365)	Odds ratio	p-value
Regional LN metastasis	33 (55.0%)	92 (25.3%)	3.60	<.00*
Distant organ metastasis	32 (52.5%)	69 (33.8%)	4.73	<.00*
Type of treatment				
Chemotherapy	48 (78.7%)	221 (60.7%)	2.39	<.01*
Radiotherapy	23 (37.7%)	136 (37.7%)	1.00	1.00
Surgery	58 (95.1%)	357 (97.8%)	0.43	.21
Comorbidities				
Diabetes mellitus	3 (4.9%)	24 (6.6%)	0.73	.61
Hyperlipidemia	6 (9.8%)	53 (14.6%)	0.63	.32
Circumference				
Above 10cm	3.6 ± 3.1	4.1 ± 3.4		.61
Below 10cm	2.0 ± 2.2	2.5 ± 2.6		.14
D-dimer	8.4 ± 4.7	2.2 ± 3.8		<.00*

Values are the mean ± SD or number (%); DVT; deep vein thrombosis, LN; lymph node, Above 10cm; circumference at 10cm above upper margin of patella, Below 10cm; 10cm below lower margin of patella,

*p<0.05. For statistical analysis, Chi-square test and Mann-whitney U test were performed.