



## The 65th ASH Annual Meeting Abstracts

**ONLINE PUBLICATION ONLY****631.MYELOPROLIFERATIVE SYNDROMES AND CHRONIC MYELOID LEUKEMIA: BASIC AND TRANSLATIONAL****Associations and Hospital Outcomes of Splanchnic Vein Thrombosis in Patients with Polycythemia Vera**

Rahman Olusoji<sup>1</sup>, Enoch Abbey<sup>1</sup>, Rajaa Mohamed Salih<sup>2</sup>, Monjila Chaity<sup>1</sup>, Meena Ahluwalia, MD<sup>1</sup>, Ibrahim Omoro, MBBS<sup>3</sup>

<sup>1</sup> Columbia University/Harlem Hospital Center, New York, NY

<sup>2</sup> Lahey Hospital and Medical Center, Burlington, MA

<sup>3</sup> Mount Sinai Hospital, New York

**Background:** Thrombosis means the presence of a blood clot in a blood vessel. While thrombosis is a relatively common condition in deep veins of the limbs and the lungs, its incidence in splanchnic veins is at least 25 times lower compared to the former. Splanchnic Vein Thrombosis (SVT) involves portal, hepatic, splenic or mesenteric veins. Polycythemia Vera (PV) is one of the significant myeloproliferative neoplasms (MPN) that cause SVT.

**Objectives:** This study examines the relationship between PV and SVT and its impact on hospital outcomes, explicitly focusing on mortality rates in affected patients.

**Methods:** This retrospective cohort study uses the 2018 to 2020 National Inpatient Sample (NIS) database. Our inclusion criteria were for patients 18 years or older with Splanchnic Vein thrombosis and Polycythemia Vera diagnosis during hospitalization. We defined splanchnic vein thrombosis as patients with portal and hepatic vein thrombosis. We examined these patients' demographics and their relationship with hospital outcomes, such as length of hospital stay, cost of hospitalization and mortality. Using univariate and multivariate logistics regression models, we measured mortality as the primary outcome.

**Result:** We identified 160,570 patients with SVT, among whom 1,120 (0.69%) had PV. PV patients were primarily female and white, with a mean age of 58.9. The PV cohort exhibited a lower mortality rate of 4.5% compared to the SVT from other etiology. Being black, increasing age, and increasing comorbidity indices were associated with increasing mortality. Though not statistically significant, there was a trend of decreasing mortality in both unadjusted and adjusted models for PV [0.68, 95% CI (0.26-1.05)] and [0.55, 95% CI (0.26-1.16)], likely underpowered by the rarity of diagnosis.

**Conclusion:** Our study shows that the mortality of SVT from PV was 45% lower compared to other causes of SVT. PV did not pose an increased mortality risk compared to other etiologies, and it was not statistically significant. There is a need for further studies to understand better and ultimately help in management guidelines for SVT in PV compared to SVT due to other causes.

**Disclosures** No relevant conflicts of interest to declare.

**Table 1: Baseline Characteristics of patients with & without PV**

Patient Characteristics	No Polycythemia Vera (N=159,450)	Polycythemia Vera (N=1,120)	P value
Died	13070 (8.2%)	50 (4.5%)	0.06
Female (%)	66565 (41.8%)	620 (55.4%)	<0.001
Race;			<0.001
White	102240 (65.6%)	905 (83.0%)	
Black	19415 (12.5%)	70 (6.4%)	
Hispanic	21855 (14.0%)	80 (7.3%)	
Asian or Pacific Islander	5715 (3.7%)	15 (1.4%)	
Native American	1470 (0.9%)	5 (0.5%)	
Other	5230 (3.4%)	15 (1.4%)	
Mean Age (years)	59.1 (14.1)	58.9 (15.5)	0.89
Charlson's Comorbidity Index; 0	17205 (10.8%)	135 (12.1%)	0.11
1	17155 (10.8%)	165 (14.7%)	
2	13820 (8.7%)	120 (10.7%)	
≥3	111270 (69.8%)	700 (62.5%)	
Median Household Income;			0.04
\$50,000-\$64,999	43195 (27.6%)	225 (20.5%)	
\$1-\$49,999	41085 (26.3%)	275 (25.0%)	
\$50,000-\$64,999	39045 (25.0%)	350 (31.8%)	
\$65,000-\$85,999	33065 (21.1%)	250 (22.7%)	
≥\$86,000			
Hospital Region;			0.19
Northeast	32365 (20.3%)	160 (14.3%)	
Midwest	34980 (21.9%)	275 (24.6%)	
South	54890 (34.4%)	395 (35.3%)	
West	37215 (23.3%)	290 (25.9%)	
Hospital Bed Size			0.59
Small	23975 (15.0%)	145 (12.9%)	
Medium	38725 (24.3%)	260 (23.2%)	
Large	96750 (60.7%)	715 (63.8%)	
Insurance Type (%)			0.18
Medicare	68145 (44.2%)	510 (47.0%)	
Medicaid	32315 (21.0%)	135 (12.4%)	
HMO/Private Insurance	46455 (30.1%)	420 (38.7%)	
Self-Pay	7210 (4.7%)	20 (1.8%)	
Census Division of Hospital;			0.11
New England	8995 (5.6%)	55 (4.9%)	
Mid-Atlantic	23370 (14.7%)	105 (9.4%)	
East North Central	23705 (14.9%)	180 (16.1%)	
West North Central	11275 (7.1%)	95 (8.5%)	
South Atlantic	29870 (18.7%)	240 (21.4%)	
West South C.	9005 (5.7%)	90 (8.0%)	
Mountain	16015 (10.0%)	65 (5.8%)	
Pacific			
Mountain Pacific	24520 (15.4%)	170 (15.2%)	
Total Charge			0.84
<\$0,000	77160 (48.6%)	545 (49.1%)	
\$50,000-\$100,000	39760 (25.1%)	260 (23.4%)	
>\$100,000	41795 (26.3%)	305 (27.5%)	
Teaching Status of Hospital;			0.67
Rural	6195 (3.9%)	30 (2.7%)	
Urban non-teaching	19505 (12.2%)	145 (13.0%)	
Urban teaching	133750 (83.9%)	945 (84.4%)	
Length of Stay	8.0 (10.64)	7.2 (6.7)	<0.001

**Table 2: Regression showing mortality with Splanchnic Vein thrombosis**

Covariate	Unadjusted Odds Ratio (95% CI)	p-value	Adjusted Odds Ratios (95% CI)	p-value
Female	1.00 (0.93-1.09)	0.91	1.06 (0.97-1.16)	0.17
Race;				
Black	1.32 (1.18-1.49)	<0.001	1.27 (1.12-1.45)	<0.001
Hispanic	1.04 (0.91-1.17)	0.59	0.80 (0.69-0.91)	0.001
Asian or Pacific I.	1.37 (1.13-1.67)	0.001	1.05 (0.85-1.29)	0.65
Native American	1.64 (1.15-2.35)	0.01	1.56 (1.05-2.33)	0.03
Other	1.33 (1.07-1.65)	0.01	1.06 (0.83-1.35)	0.65
Mean Age (years)	1.02 (1.01-1.02)	<0.001	1.02 (1.02-1.03)	<0.001
Charlson's Comorbidity Index;				
1	1.95 (1.46-2.62)	<0.001	1.70 (1.24-2.33)	0.001
2	2.74 (2.05-3.67)	<0.001	2.08 (1.52-2.85)	<0.001
≥3	5.48 (4.31-6.96)	<0.001	4.34 (3.34-5.65)	<0.001
Median Household Income;				
\$50,000-\$64,999	0.90 (0.67-0.87)	0.08	0.95 (0.84-1.08)	0.45
\$65,000-\$85,999	0.88 (0.72-0.92)	0.02	0.89 (0.78-1.00)	0.06
≥\$86,000	0.92 (0.86-1.11)	0.16	0.87 (0.76-1.00)	0.05
Hospital Region;				
Midwest	0.76 (1.01-1.03)	<0.001	-	
South	0.82 (1.04-1.06)	0.001	-	
West	0.97 (1.06-1.09)	0.68	-	
Polycythemia Vera	0.68 (0.26-1.05)	0.068	0.55 (0.26-1.16)	0.12
Hospital Bed Size				
Medium	1.12 (0.97-1.31)	<0.001	1.01 (0.86-1.18)	0.93
Large	1.37 (1.20-1.57)	0.083	1.12 (0.97-1.30)	0.13
Length of Stay	1.01 (1.01-1.02)	<0.001	1.00 (0.99-1.00)	0.44
Census Division of Hospital;				
New England	1.04 (0.84-1.30)	0.71	0.74 (0.58-0.94)	0.01
Mid-Atlantic	0.83 (0.66-1.03)	0.09	0.75 (0.60-0.95)	0.02
East North Central	0.70 (0.54-0.91)	0.01	0.60 (0.45-0.80)	0.001
West North C.	0.79 (0.64-0.98)	0.03	0.66 (0.53-0.84)	<0.001
South Atlantic	0.95 (0.74-1.23)	0.71	0.89 (0.67-1.17)	0.41
West South C.	0.87 (0.69-1.10)	0.26	0.72 (0.55-0.93)	0.01
Mountain	0.77 (0.60-0.99)	0.04	0.61 (0.46-0.81)	0.001
Pacific	1.13 (0.91-1.40)	0.27	0.78 (0.61-0.99)	0.04
Teaching Status of Hospital;				
Urban non-Teaching	1.08 (0.84-1.38)	0.57	0.81 (0.62-1.06)	0.12
Urban teaching	1.30 (1.04-1.63)	0.02	0.84 (0.67-1.06)	0.15
Insurance Type				
Medicaid	1.05 (0.95-1.17)	0.33	1.52 (1.34-1.74)	<0.001
HMO/Private	0.76 (0.69-0.84)	<0.001	1.09 (0.96-1.23)	0.17
Self-Pay	0.87 (0.72-1.06)	0.17	1.48 (1.18-1.85)	0.001
Total Charge				
\$50,000-\$100,000	1.86 (1.65-2.09)	<0.001	1.78 (1.57-2.02)	<0.001
>\$100,000	4.14 (3.76-4.57)	<0.001	4.23 (3.74-4.79)	<0.001

**Figure 1**

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