

Impact of venous thromboembolism in patients with Hepatocellular Carcinoma

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Introduction:

- Patients with cancer are prone to thromboembolism (VTE). In hepatocellular carcinoma (HCC) VTE rates are increased due to a hypercoagulable state from malignancy and cirrhosis.
- We analyzed National Inpatient Sample (NIS) to understand the burden of VTE in patients with HCC.

Results:

- 73,600 patients with HCC also had VTE; 38% were females. Mean age was 65 years.
- Average hospital length of stay was 9 days for patients with VTE and 6 days for those without VTE.
- HCC patients with VTE had higher odds of mortality [1.51, 95% Confidence Interval (1.28 – 1.77)]; patients with concomitant AKI had higher odds of mortality [5.08 (4.73 – 5.45)].
- VTE patients had higher length of stay - ~3 days [2.7, (2.2 – 3.3)].
- VTE patients also had a higher total hospital charge [\$50967 (31204 – 70731)].

Methods

- Data obtained from NIS Database (2016 – 18).
- ICD-10 codes for diagnosis of HCC and VTE utilized.
- STATA MP 16.1 used for multivariate regression analysis
- Primary outcome was inpatient mortality. Secondary outcome was hospital length of stay and total hospital charge.
- Data was considered statistically significant if p-value was <0.05.

Inpatient Mortality	Odds Ratio	P Value	95% Confidence	Intervals
Venous Thromboembolism	1.507	0.000	1.280	1.775
Acute Kidney Injury	5.078	0.000	4.730	5.452
Gender (Female)	0.865	0.000	0.805	0.929
Teaching Hospital Status	0.768	0.000	0.708	0.833
Length of Stay	Coef.	P Value	95% Confidence	Intervals
Venous Thromboembolism	2.770	0.000	2.212	3.330
Acute Kidney Injury	2.853	0.000	2.666	3.041
Gender (Female)	0.275	0.000	0.139	0.411
Teaching Hospital Status	0.987	0.000	0.846	1.128
Total Charge	Coef.	P Value	95% Confidence	Intervals
Venous Thromboembolism	50967.99	0.000	31204.47	70731.51
Acute Kidney Injury	48517.72	0.000	43804.05	53231.39
Teaching Hospital Status	26046.93	0.000	22526.23	29567.62

Conclusion:

- Patients with hepatocellular carcinoma that develop venous thromboembolism have higher odds of inpatient mortality, increased length of stay and subsequent total hospital cost.
- It is important to consider these patients for prophylaxis for thromboembolism.