

Incidence of DVT/PE among Cancer Patients after Receiving Endoscopy with General Anesthesia: A Retrospective Chart Review

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INTRODUCTION:

General anesthesia and cancer both increase the risk of venous thromboembolism (VTE), yet the incidence of post-procedure deep venous thrombosis (DVT) and pulmonary embolism (PE) in oncologic patients undergoing general anesthesia for endoscopic procedures is not well-defined. Current guidelines for thromboprophylaxis in this population are lacking, despite evidence that preventive measures can reduce VTE risk by 50-70%. We conducted a retrospective chart review to evaluate DVT/PE incidence in cancer patients receiving general anesthesia for endoscopic procedures.

METHODS:

Baseline demographic and clinical data was collected from a cohort of 423 patients with a cancer diagnosis, who underwent endoscopic procedures under general anesthesia from January 2023 to February 2024. Endoscopic procedures conducted under general anesthesia included esophagogastroduodenoscopy (EGD), flexible sigmoidoscopy, endoscopic retrograde cholangiopancreatography (ERCP), and colonoscopy. The incidence of post-procedural VTE was confirmed through radiological assessments (Doppler ultrasound, V/Q scanning, or computed tomography of the pulmonary arteries). Descriptive statistics, Fisher’s exact tests, and Student’s t-tests were used to analyze demographic and clinical variables among the patient cohort.

Table 1: Demographic and Clinical Variables Stratified by Presence of Post-Endoscopy VTE			
	VTE Post-Endoscopy (n=432)		p-value
	Yes: n=34	No: n=398	
Mean Age (years)	55.8 (18.3)	64.8 (12.6)	0.478 ^a
Gender (% Female)	41.2	38.9	0.244 ^b
Mean BMI	26.1 (8.5)	27.7 (6.9)	0.174 ^a
History of Prior DVT/PE (%)	25	28.1	0.469 ^b
Current/Former Smoking Status (%)	41.6	45.3	1.00 ^b
Solid Malignancy (%)	100	94.4	1.00 ^b
Mean Comorbidities	1.6 (1.4)	2.2 (1.2)	0.452 ^a
Mean Intra-Op Paralytic Dose (mg)	112.5 (56.5)	117.3 (122.3)	0.845 ^a
Mean Procedure Duration (minutes)	26.2 (17.8)	36.9 (25.3)	0.482 ^a
Mean Follow Up Duration (days)	211 (113)	203 (129)	0.710 ^c
^a student's t-test ^b Fisher’s exact test ^c Welch’s t-test			

RESULTS:

Of the 423 patients, 34 (8%) developed VTE. Among these 34 patients, 41.1% had a DVT, 26.5% had a PE, and 32.4% had both, on average 118 days post-procedure (median 80, SD 114). The mean age was 64.8 years (SD 12.6), mean BMI 26.5 kg/m² (SD 11), and 60.8% were male. No significant differences were found in age, BMI, gender, smoking and drinking history, comorbidities, history of prior DVT/PE, cancer type, ASA class, or procedure length between VTE and non-VTE patients. In the VTE group, 17 patients underwent ERCP, 16 patients underwent EGD, and 1 patient sigmoidoscopy.

DISCUSSION:

Our findings demonstrate an incidence of DVT/PE of 8% in cancer patients undergoing endoscopic procedures under general anesthesia. This incidence is higher than that of patients receiving thromboprophylaxis for low-risk surgical procedures under general anesthesia. These findings suggest that further studies are needed to guide potential recommendations for thromboprophylaxis in the oncologic patient population presenting for endoscopic procedures under General Anesthesia.

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CONCLUSIONS

The incidence of DVT/PE in cancer patients undergoing endoscopic procedures under general anesthesia is 8%, higher than rates in low-risk surgical patients receiving thromboprophylaxis. These results indicate a need for further research to guide thromboprophylaxis recommendations for this population.