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Research

Deep Vein Thrombosis – A Case Report

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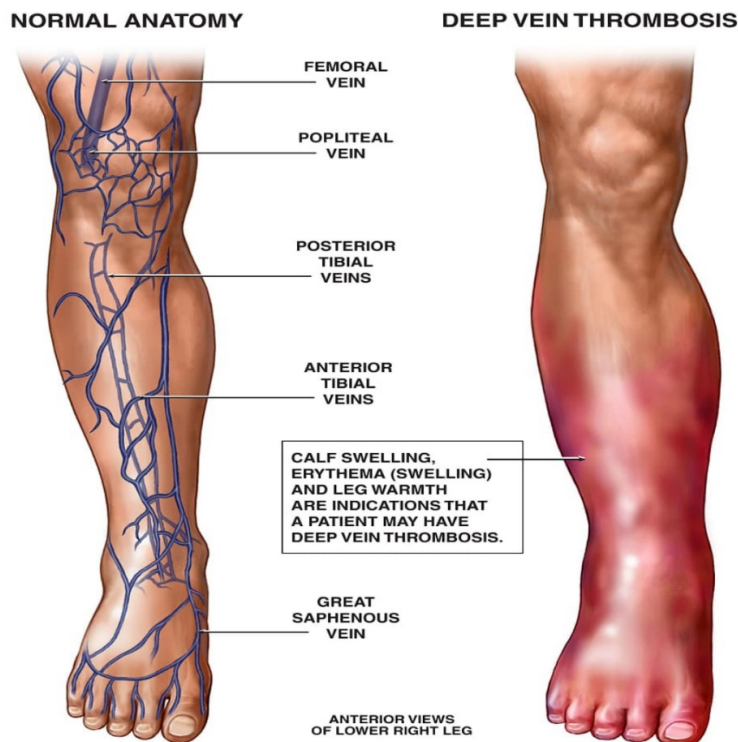
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	Abstract
Published on: 29 Oct 2025	Deep Vein Thrombosis (DVT) is a condition characterized by clot formation within the deep veins, commonly affecting the lower limbs and posing a risk of pulmonary embolism. A 55-year-old male presented with unilateral leg swelling, pain, and warmth following prolonged immobility. Doppler ultrasound confirmed an occlusive thrombus in the left popliteal vein. The patient was managed with low molecular weight heparin, oral anticoagulants, limb elevation, and compression therapy. Improvement was observed within one week of treatment. This case highlights the importance of early diagnosis, anticoagulation, and lifestyle modification to prevent recurrence and serious complications.
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	Keywords: Deep Vein Thrombosis, Anticoagulants, Doppler, Leg Swelling.

INTRODUCTION

Deep Vein Thrombosis (DVT) is a vascular disorder in which a blood clot forms within the deep veins, most commonly in the lower limbs. It occurs due to venous stasis, endothelial injury, and increased blood coagulability, collectively known as Virchow's Triad. Typical symptoms include limb swelling, pain, warmth, and tenderness. Prolonged immobility, smoking, obesity, surgery, and hypertension are common risk factors. If untreated, the clot can migrate to the lungs and cause a life-threatening pulmonary embolism. Diagnosis is primarily made using Doppler ultrasonography and elevated D dimer levels. Early anticoagulation therapy is essential to prevent complication and reduce recurrence.



CASE PRESENTATION:

A 55-year-old male presented to the Emergency Department with Sudden onset of pain in the left calf, Redness and warmth, Progressive swelling for 2 days, Difficulty walking, He works long hours sitting as a manager. No recent trauma.

PRESENT MEDICAL HISTORY:

The patient was apparently normal 2 days prior. He developed sudden calf discomfort after a 10-hour bus journey. Swelling worsened, associated with aching pain. No history of fever or trauma. Admitted on to the Medical Unit.

PRESENT SURGICAL HISTORY:

None.

PAST ILLNESS HISTORY:

Hypertension × 5 years
Dyslipidemia
No diabetes, cardiac disease, or prior clots.

FAMILY HISTORY:

No hereditary thrombophilia, stroke, or clotting disorders reported in family.

PERSONAL HISTORY:

Diet: Mixed
 Occupation: Desk-based
 BMI: 29 kg/m² (overweight)
 Sleep: Normal
 Elimination: Normal
 Addictions: Occasional smoker for 20 years

PHYSICAL EXAMINATION:

On physical examination, the patient was alert, oriented, and moderately built. Vitals were stable with a slightly elevated heart rate. Inspection of the left lower limb revealed noticeable swelling, redness, and increased local warmth. Palpation showed tenderness over the calf region, and a positive Homans sign was elicited. Peripheral pulses were palpable, and no signs of cyanosis were noted. The right limb and systemic examination were within normal limits.

VITALS:

Parameter	Value
BP	146/92mmHg
HR	98bpm
RR	18/min
Temperature	98.2f
SPO2	98%

Laboratory investigations showed normal hemoglobin, WBC count, and platelet levels, with a mildly elevated ESR indicating inflammation. Coagulation profile (PT/INR) remained within normal limits, while the D-dimer level was significantly elevated, suggestive of active thrombus formation. Biochemical parameters, including renal function and electrolytes, were normal. Lipid profile revealed elevated cholesterol and LDL, indicating dyslipidemia.

SPECIAL INVESTIGATION:

- Doppler Ultrasound of Left Lower Limb**

Presence of occlusive thrombus in popliteal vein

Reduced venous flow

No extension into femoral vein

- Chest examination** : clear

TREATMENT:

S.NO	DRUG	DOSE	ROUTE	FREQUENCY	ACTION
1.	Inj. Enoxaparin (LMWH)	60mg	SC	BD	Prevent further clot formation
2.	Tab. Warfarin	5mg	PO	OD	Long term anticoagulation
3.	Tab. Telmisartan	40mg	PO	OD	Blood pressure control
4.	Tab. Atorvastatin	20mg	PO	HS	Lipid control
5.	Tab. Paracetamol	500mg	PO	SOS	Pain relief

DISCUSSION:

DVT occurs due to blood stasis, endothelial injury, and hypercoagulability (Virchow's triad). Risk factors in this patient Prolonged immobility (long bus travel), Smoking, Hypertension & dyslipidemia, Overweight, Complications to monitor: Pulmonary embolism, Chronic venous insufficiency. Post-thrombotic syndrome Early anticoagulation prevents clot propagation and embolization.

CONCLUSION:

A 55-year-old male was diagnosed with popliteal vein DVT following prolonged immobilization. He responded well to anticoagulation therapy. Early diagnosis is essential to prevent pulmonary embolism, a life-threatening complication

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