

Risk factors for deep vein thrombosis after traumatic lower extremity fracture. Qian et al. *Medicine*, Volume 103, 2024.

DOI: 10.1097/MD.00000000000038439

Level of Evidence: 4

Reviewer:

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Subsequent to lower extremity fracture(s), deep vein thrombosis (DVT) becomes a notable concern, especially for patients who undergo orthopedic surgery. This comprehensive study aimed to pinpoint the factors that increase the risk of DVT in patients by analyzing data from studies published between January 2005 and November 2023.

The study reviewed thirteen articles, encompassing 2,699 patients with thromboembolism (VTE) and 130,507 individuals without VTE, and unveiled five significant risk factors for DVT:

- VTE history (risk ratio [RR] = 6.45)
- age over 60 (RR = 1.60)
- prolonged immobility (RR = 1.52)
- heart failure (RR = 1.92), and
- obesity (RR = 1.59).

It is crucial to identify these risk factors in patients with lower limb fractures as they significantly impact DVT occurrence. The study suggests taking steps such as clot prevention measures and rehabilitation strategies to reduce DVT risks in vulnerable groups.

Various factors contribute to DVT development in these patients, making it a complex and multifaceted issue that requires the attention and expertise of our healthcare community. As noted above, factors like extended periods of immobility after surgery, the body's inflammatory response to trauma, and pre-existing conditions such as heart failure and obesity can increase the chances of blood clot formation.

Healthcare professionals need to be vigilant for vein thrombosis (DVT) in patients with extremity fractures caused by accidents, especially in those who have risk factors. Early detection and treatment are essential to prevent complications linked to DVT, like embolism. Our study underscores the need for further research to investigate how other risk factors, like smoking and high blood pressure, impact the occurrence of DVT in this group.



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