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Patients using warfarin have higher risk of death after trauma

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Warfarin use may be associated with a significant increase in the risk of death after traumatic injuries, according to a report posted online today that will appear in the May print issue of *Archives of Surgery*.

"The prevalence of warfarin use in the United States is unknown, but the Food and Drug Administration estimates that more than 31 million prescriptions for warfarin were written in 2004," according to background information in the article. "Warfarin is a commonly used anticoagulant [prevents the formation of blood clots] for the long-term management and prevention of thromboembolic (blood clot formed in one vessel carried by the blood stream to occlude another vessel) events associated with atrial fibrillation (abnormal heart rhythm), mechanical heart valves, deep venous thrombosis (clot formed in a vein deep in the body), pulmonary embolism (clot that causes blockage of a blood vessel in the lung), the antiphospholipid syndrome (condition that increases the risk of blood clot formation) and occasionally, myocardial infarction (heart attack)."

Using the National Trauma Databank, Lesly A. Dossett, M.D., M.P.H., of Vanderbilt University Medical Center, Nashville, Tenn., and colleagues, studied data from more than 1.2 million individuals admitted to eligible trauma centers between 2002 and 2007. Of these, 36,270 patients (3 percent) and 26,841 patients older than 65 (9 percent) were classified as warfarin users. The total proportion of warfarin users increased from 2.3 percent in 2002 to 4 percent in 2006, and in those age 65 and older, from 7.3 percent in 2002 to 12.8 percent in 2006.

Overall, warfarin users were also more likely to die from their injuries compared to non-users (9.3 percent vs. 4.8 percent). Warfarin users were also more likely to have blunt mechanism injuries (87 percent vs. 96 percent), were more likely to sustain their injuries in the home or residential institutions and as a group, experienced more severe injuries. Warfarin users were also more likely to be admitted with intracranial hemorrhage (bleeding within the brain). Among all individuals admitted with intracranial hemorrhage, warfarin users had a significantly increased risk of death than non-users (22 percent vs. 18 percent); however, among those 65 and older, there was no difference in risk of death between the two groups.

"The most profound impact is among younger patients with head injuries," the authors write. "While older patients with severe head injuries have high mortality rates whether or not they are warfarin users, warfarin use increases the mortality from severe head injuries by 50 percent in patients younger than 65 years."

"These data support other reports that suggest that patients who undergo pre-injury anticoagulation with warfarin are at increased risk of death after trauma," the authors conclude. "Warfarin prescribers should consider these data in the overall risk-benefit analysis when opting to prescribe warfarin, and these data provide further rationale for discontinuing warfarin when the clinical evidence no longer supports its use."

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