Commentary on Modes of Failure in Venous Thromboembolism Prophylaxis

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In our previous article, Modes of Failure in Venous Thromboembolism Prophylaxis, we examined the points of failure in deep venous thrombosis prophylaxis in our post-operative population. We retrospectively identified 128 post-operative patients that developed iliofemoral deep venous thrombosis. We showed that there were four primary areas of failure: stratification, ordering the correct intervention, delivering the correct intervention, and continuing the correct intervention. We found that 53% of patients were correctly stratified and only 15% of patients received the appropriate chemoprophylaxis at admission without inappropriately missed doses. Additionally, 89% of patients had a delay or interruption of mechanical prophylaxis and 75% had both inadequate mechanical and chemoprophylaxis.

Similar barriers have been described in the literature. The primary goals of any strategy to combat inadequate prophylaxis are based upon standardized risk assessment, provider education, and effective delivery. In our study we used the Caprini risk stratification score to guide perioperative deep venous thrombosis prophylaxis. However, we did not employ a standardized bleeding risk analysis. Using a standardized bleeding risk analysis is helpful in decision making for chemoprophylaxis. Our recommendation would be to use a standardized deep venous thrombosis risk scoring system to assess the need of chemoprophylaxis and/or mechanical prophylaxis, and establish a standardized bleeding risk analysis to establish when chemoprophylaxis should be foregone or postponed until the bleeding risk is acceptably low. These evaluations should be mandatory parts of the pre-operative evaluation or admission of the patient to the hospital. Computerized assistance through the electronic medical record system can increase accuracy and aid decision making. Furthermore, risk assessment should be not a one-time event, the patient should be reassessed depending on changes in clinical status [1].

Successful systems center on education of the providers ordering the deep venous thrombosis prophylaxis and the nursing staff delivering the interventions. Barriers to this aspect of VTE prophylaxis have been primarily identified through qualitative analysis. These studies primarily identified lack of education about the importance of VTE prophylaxis and the appropriate delivery as impediments to appropriate prophylaxis. Additionally, work load, poor supervision, and safety concerns have been identified as barriers to VTE delivery. These barriers may be hospital, unit, or service line specific. Process improvement initiatives can help identify system opportunities for improvement.

Reference


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