
Weighing Benefits and Risks

Glucocorticoids and Thromboembolism

Glucocorticoids are one of the most widely prescribed medications. They are effective for a large and diverse set of illnesses ranging from asthma to systemic lupus erythematosus. Unfortunately, their efficacy is accompanied by many adverse effects, including increased infection risk, hyperglycemia, hypertension, and mania.

But does glucocorticoid use also cause venous thromboembolism? This is not a simple question to answer because some of the illnesses that are treated with glucocorticoids may themselves cause venous thromboembolism (eg, autoimmune diseases) or may result in immobility that predisposes to venous thromboembolism.

This population-based case-control study provides strong evidence that glucocorticoids are associated with an increased risk of venous thromboembolism. The increased risk was found not only for systemic glucocorticoids but also for inhaled glucocorticoids and glucocorticoids acting on the intestines. Since this is an observational study, residual confounding cannot be eliminated as a possible explanation for the association between glucocorticoids and venous thromboembolism. However, a causal link is strengthened by the risk being stronger with new users and with higher doses in an analysis that adjusts for a number of potential confounders. Given the already known serious adverse effects of glucocorticoids, establishing an elevated risk for venous thromboembolism with this study does not change the indications for glucocorticoids, but it should remind us to always make sure that the potential benefits of treatment outweigh the risks (eg, does this patient’s asthma require an inhaled corticosteroid?) and to be prepared to diagnose and treat thromboembolism.

Mitchell H. Katz, MD