Use of Heparin in Pregnancy May Have No Benefit

New research may debunk a 20-year practice of prescribing low molecular weight heparin (LMWH) to pregnant patients at risk for blood clots.

A treatment that has been used for more than two decades to prevent thrombosis in pregnant women may not be as effective at preventing pregnancy-related complications after all. A study of pregnant women at high risk for developing thrombosis showed that low molecular weight heparin (LMWH) may actually not be effective in preventing clotting disorders. Published by The Lancet on July 24, the study was led by Marc Rodger, MD, Chief of Hematology at The Ottawa Hospital.

Thrombophilia during pregnancy carries an elevated risk of thrombotic events, which can be as much as three to four times higher. Comorbid conditions can further raise this risk, and heparins are the standard treatment to prevent thrombosis in pregnant patients. There is a lack of clinical evidence to support treating pregnant patients with heparin, but for more than two decades, experts have recommended its use. In some cases, women with no risk factors may be prescribed anticoagulants in the hopes of preventing blood clots and associated poor pregnancy outcomes. However, the open-label randomized trial of 292 pregnant women at high risk for thrombosis may be the catalyst that changes the current standards of treatment. The women in the study were recruited over a 12-year period from among five different countries and were randomized to receive either no treatment or 5000 IU of LMWH daily until 20 weeks' gestation. Both patients and their caregivers were aware of the group to which the individual patients were assigned. Researchers monitored patients for severe or early-onset preeclampsia, low birthweight, pregnancy loss, or venous thromboembolism.

Surprisingly, the study showed that both the group receiving heparin and the group not receiving heparin had a similar incidence of thromboembolism, pregnancy loss, and placenta-mediated pregnancy complications. Further, the risk of major bleeding was not increased in the heparin group over the non-heparin group, but there was an increased risk of minor bleeding in the heparin group. In a statement from The Ottawa Hospital Research Institute, Dr Rodger said, "While I wish we could have shown that LMWH prevents complications, we actually proved it doesn't help."

There are harms associated with the use of heparin, including the pain of the injections (which can lead to bruising), the cost of the drug, an increased risk of induction, and a risk of bleeding. Treating women at risk for thrombosis is difficult not only because of the lack of clinical evidence but also because at-risk patients seek preventive care. While this study shows anticoagulants are not helpful in most cases, they might still be useful for some pregnant women who have antiphospholipid antibody syndrome or who have experienced severe pregnancy complications in the past. The study authors call for clinical trials to better understand the use of LMWH in these patients.

The authors of the editorial that accompanies the study point out that a lack of clear guidelines, coupled with the desire to avoid poor outcomes, could lead practitioners to treat despite the lack of evidence. The editorial goes on to anticipate that the study results may lead clinicians to discontinue using heparin in these patients but does cite some problems with the study, including the small sample size, the long length of time to recruit the participants, the lower-than expected number of adverse events, and the confounding use of aspirin in both groups.

References:


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