Optimal Dose of Oxytocin for Labor Induction

The science still isn't clear on the best dosing practices for oxytocin when inducing labor.

That was the conclusion of a Cochrane meta-analysis involving nine trials as the editors went on to recommend more research in order to better determine the best protocol.

For the review, the editors looked at clinical trials that compared giving women a high dose versus a low dose of oxytocin for inducing labor. The review included 2,391 women and their babies.

Key Points:

- Science still hasn't determined the best dosing protocols for administering oxytocin in inducing labor.

- More high-quality studies are needed.

They found the higher doses, defined as women who received at least 100 mU in the first 40 minutes with increments of at least 600 mU in the first two hours, did not shorten the time to delivery or improve the likelihood of giving birth within 24 hours, when compared with low-dose oxytocin. A low dose was defined as less than 100 mU in the first 40 minutes and increments of less than 600 mU total in the first two hours.

There was also no difference between the two dosing regimens when it came to serious maternal morbidity or death. Neonatal morbidity and perinatal death was also unaffected by the dose of oxytocin.

High-dose oxytocin was shown to increase the rate of uterine hyperstimulation but the effects of the finding were not clear, the authors reported.

The editors also noted that some of the trials were poorly executed and were highly biased. By removing those from the analysis, the researchers found that the induction to delivery interval was significantly shorter with high-dose oxytocin compared with low-dose oxytocin.

Given the findings of the analysis, the debate over the optimal dose, and the impact on the outcomes for mother and baby, will likely continue, the authors note. More high-quality clinical trials are needed to determine everything from the appropriate dose to how the drug is delivered, be it through continuous or pulsed infusions.