

Quadratus lumborum block for cesarean delivery

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Video Abstract

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Abstract

What's the best way to control pain after a cesarean section? Women who give birth by C-section typically receive a spinal anesthetic, usually with a small amount of morphine to control pain after surgery. A more novel technique known as the quadratus lumborum block, in which anesthetic is injected into the waist area, might be able to provide even more pain relief. But the method hasn't been consistently studied. Now, a meta-analysis from researchers from the Universities of Ottawa and Toronto in Canada and the Ohio State University finds that the quadratus lumborum block doesn't offer a benefit on top of or in place of morphine – but it does improve pain control when morphine isn't used. Some scientists have reported that the quadratus lumborum block improves pain control after a C-section. Because the anesthetic is given next to the quadratus lumborum muscle, the block might be able to treat the somatic pain of the C-section incision along with the surgery's visceral pain. But the trials that have been done have used multiple designs, making it difficult to know whether the block is truly effective. To resolve these issues, the research team conducted a systematic review and meta-analysis. Out of 82 identified studies, 12 randomized controlled trials – which included nearly a thousand patients – met the criteria for inclusion. Of the 12 studies, four compared spinal morphine alone to spinal morphine with the addition of the quadratus lumborum block; four evaluated the block versus morphine; and eight compared the block versus no morphine. The primary outcomes were pain severity four to six hours after surgery and analgesic consumption within 24 hours of the C-section. In the studies in which women received the quadratus lumborum block on top of morphine, the team found no benefit to patients. Similarly, when doing a head-to-head comparison of the block to morphine, the block was not superior. But compared with women who didn't receive spinal morphine, the block did significantly improve pain control, as it was associated with a decrease in pain scores and reduced opioid consumption. The results suggest that there may be no reason to replace standard-of-care morphine with the quadratus lumborum block, which is time-consuming and can be difficult to perform – and has been associated with complications. However, there may be instances in which the block can be useful, such as when morphine could not or should not be used.