Contraction-Sensitive Medication Release System to Reduce Labor Pain

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Technology description

Administers Analgesic Relief to Match Timing and Intensity of Labor Contractions

This contraction-sensitive medication release system dramatically reduces labor pain by administering analgesic relief to match timing and intensity of contractions in real time. Labor can be an extremely painful experience, and many women opt for medications or methods to numb the nerves sensing pain during childbirth. Although a variety of options exist for pain relief during labor, most women prefer to remain aware and in control during the birthing process. Neuraxial analgesia pain relief (epidural or spinal) effectively manages pain, while allowing the recipient to remain conscious with minimal loss of muscle function. Intravenous analgesics (primarily opioids) are another, somewhat less effective, option for patients who cannot or choose not to have an epidural. Unfortunately, opioids are associated with many possible complications. This contraction-sensitive medication release system delivers analgesia pain relief to women without the use of a spinal block. Pain is effectively managed by administering analgesic relief to match the timing and intensity of contractions.

Technology

This event-sensitive medication release for managing labor pain provides a safe and effective way to coordinate pain relief with contractions. It employs a uterine activity monitor that anticipates the onset of a contraction and uses this information to trigger an audible, visual or electronic signal. The intent of the signal is to help time short-acting analgesics to have peak effect coincident with contraction pain. Options for the analgesic method are numerous, including a short-acting intravenous opioid, inhaled nitrous oxide or other agent, or electrical stimulation.

Application area

Event-sensitive medication release for reducing labor pain

Advantages

Real-time prediction of contractions, providing a highly coordinated release of pain medication maximizing patient comfort
Promotes rest without loss of muscle function, ensuring the patient can actively participate in labor while dramatically reducing pain
Provides accurate estimation of length of contractions to release a custom-tailored amount of pain relief at the optimal time
Uses short-acting pain relief, formulated specifically to coordinate with intermittent labor pains maximizing patients' ability to optimally participate in the birthing process
Reduces risk of side effects, maximizing safety of mother and fetus

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