

# Paravertebral Blocks: Benefits Beyond Expectations

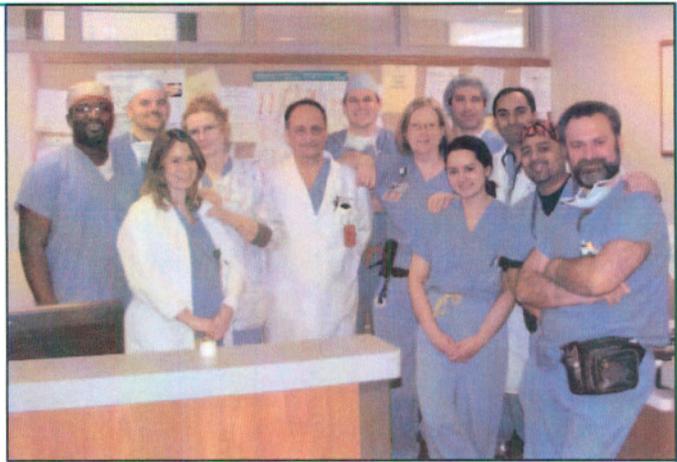
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WE'VE LONG KNOWN HOW WELL PARAVERTEBRAL blocks control pain. But after administering more than 6,000 of them, we're seeing that the benefits go far beyond what we imagined. Paravertebral blocks are safer than epidurals, as they reduce the risks of epidural abscess and hematoma. They also eliminate the need for a Foley catheter, and reduce the length of stay in the hospital. Most recently, paravertebral blocks have been suggested to have significant benefits for cancer patients.

At UPMC, we perform more than 200 continuous paravertebral blocks per month to control post-op pain after breast, thoracic, abdominal, nephrectomy, hernia, and hysterectomy. Our experience bears out research showing that, after major breast surgery (mastectomy, lumpectomy, reconstructive surgery), continuous-infusion paravertebral blocks reduce pain much more effectively than single paravertebral blocks or even wound infusions of local anesthetics. This is important, because these patients experience very high rates of pain after surgery.

For breast surgery patients, the blocks may offer longer-term benefits. Studies suggest that breast patients who receive paravertebral blocks combined with general anesthesia, rather than general anesthesia only, are less likely to develop chronic post-surgical pain. What's more, these patients are less likely to have cancer recurrence, possibly because the neuroendocrine stress response to surgery is also blocked. This response is thought to hinder immune cell function.

Paravertebral blocks have also helped us overcome hypotension, an important limitation of epidurals, while providing the same level of pain control. In addition, paravertebrals are safer than epidurals in patients benefiting from thromboprophylaxis. As opposed to epidurals, paravertebrals do not increase the risk of epidural hematoma, a true emergency that can lead to paralysis. Also, epidurals typically are not used in com-



Every day, our entire surgical team sees firsthand the benefits of paravertebral blocks, thanks to our focus on safety and training.

ination with thromboprophylaxis. The need for post-op thromboprophylaxis is not a contraindication for the use of continuous paravertebral blocks.

Unlike epidurals, paravertebral blocks don't contribute to urinary retention, minimizing the need for catheterization. Our own retrospective review also shows that blocked patients can leave the hospital sooner. We studied over 100 radical prostatectomy patients. Those with bilateral paravertebral blocks had a reduced length of stay by 9 hours (47 vs 56 hours). In this study we also demonstrated that paravertebrals lowered pain scores and the consumption of opioids.

Patients receiving these blocks can experience complications, but the risks of these complications very much depends on the practitioner's training. At UPMC-Shadyside, we have only seen two cases of partial pneumothorax in over 6,000 blocks, one of which was due to practitioner error. For us, the benefits clearly outweigh any risks.

The main barrier for the use of these techniques is the limited number of anesthesiologists trained to safely perform them. In our practice this also represents a limitation for their use as an anesthetic technique as well as for post-op pain.

*References supplied upon request.*



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