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Introduction/Background

Multiple rib fractures are a common injury in trauma patients which carries high morbidity and mortality. Mortality is correlated with the number of affected fractured bones. Early mobilization and respiratory physiotherapy correlate with improved morbidity outcome. Effective pain control is critical in facilitating respiratory therapy. We report our experience using 2 paravertebral catheters for the management of pain following very extensive rib fractures (>6).

Main Results

We present two patients with extensive rib fractures. In both patients two continuous paravertebral catheters were inserted on the affected side. In patient 1, dramatic improvement of respiratory parameters was observed with concomitant pain relief. In patient 2, an important decrease in the consumption of opioids and visual analogue pain scores were observed following the performance of the nerve blocks.

Conclusion

The use of 2 continuous paravertebral catheters as an option appears to be an interesting alternative for effective pain management following very extensive rib fractures.

Discussion

Our case report suggests that the use of two continuous thoracic paravertebral blocks may represent an interesting approach for the management of pain associated with very extensive rib fractures. The use of epidural anesthesia is limited in the trauma patient due to the need for anticoagulation. Karmakar et al demonstrated that the use of a continuous paravertebral block was also effective in managing pain while improving oxygenation and other respiratory parameters (1,2). Since the spread associated with a paravertebral injection is limited (3,4) the use of one continuous thoracic paravertebral catheter is unlikely to provide a spread extensive enough to allow the diffusion of local anesthetics beyond 3-5 segments. Therefore, in patients with very extensive rib fractures the placement of 2 paravertebral catheters is required and this report further provides the evidence for the double paravertebral catheter placement in the extensive unilateral rib fractures.

Reference:

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