



Letter to the Editor

Peripheral Nerve Blocks Should Be Performed With Ultrasound Guidance, Even on the Playing Field

Like many American football fans, we were interested to read the widely reported news that an NFL quarterback sustained a “punctured lung” when a team doctor attempted a “pain killing injection” prior to the game.¹ The player was reportedly admitted to the hospital thereafter and missed the game. While the exact nature of his fractures, analgesic block, and sequelae are unclear from the lay media, in light of this news we feel it is imperative to highlight the importance of performing these specialized regional anesthetic and analgesic techniques with image-guidance – essentially a standard of practice in anesthesiology.

While there are multiple regional anesthetic options for hospitalized patients, given the need to maintain high-level motor control to perform on the field as an elite athlete, the motor-sparing intercostal block is a reasonable choice to facilitate analgesia in this population.^{2,3} However, intercostal blocks, like other thoracic regional nerve blocks, pose a risk of pneumothorax due to the proximity of the neurovascular bundle to the pleura.

Although professional American football-specific data are sparse, survey data from NFL physicians indicated that 57% of NFL teams performed anesthetic blocks for both acute and “elective” (sub-acute) rib fractures, and 39% of teams performed anesthetic blocks for elective fractures to facilitate return to play.⁴ In that survey, only one NFL team reported that they never offered such a block.⁴

There are numerous examples in the medical literature highlighting how both safety and efficacy of regional anesthetics have been significantly improved with image guidance compared to use of anatomical landmarks alone. Specifically, use of ultrasound has been shown to improve block success and reduce complications during placement of peripheral nerve blocks.⁵ With the improved technology, low cost, and favorable size of portable or hand-held ultrasound machines, it is reasonable to encourage the use of this effective technology for such widely performed procedures. Indeed, ultrasound-guided local anesthetic injections have been documented in the Australian Football League for game-day injections without complications.⁶

Given the widespread use of intercostal blocks in the NFL and the risk of pneumothorax when using a landmark-based technique, we highly encourage the use of ultrasound as a quick, easy, inexpensive, and effective method for identifying pleura, rib, and vasculature, thereby improving safety. Additionally, in the high-stakes environment of professional sports, in which many pro athletes and team physicians feel pressure to get back on the field quickly, at times sacrificing their own health to do so,² there is an opportunity for experts in regional anesthesia and pain medicine to collaborate with our sports medicine colleagues for the assessment and provision of ultrasound-guided regional anesthesia in this setting. ■

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