



## **Editor-in-Chief Pick October 2022**

By Jeffrey A. Kline, MD

### **Simplifying the Matrix**

The orthopedic surgeon was wearing a coat and tie on a Saturday night. He squinted at the plain film radiograph as he held it over his head, using the ceiling fluorescent light to read it. He turned his gaze to me and made a chopping motion with this hand: “The problem is that the humeral head is subglenoid. You have to flex the shoulder and then externally rotate.” He did so and reduced the shoulder. Thirty years later, I still vividly remember this scene when I was moonlighting as a resident at a rural emergency department in Albemarle County, North Carolina. Failing to reduce the 20-year-old softball player’s shoulder, I had to suffer the humiliation of calling the orthopedic surgeon on call. Fortunately, he was calm and respectful to me, which was then a rarity.

In emergency care, reducing an anterior shoulder usually goes in one of two directions. Regardless of anesthetic and reduction technique, in about 75% of cases, reducing a shoulder is satisfying, like popping bubble wrap. Clunk...it goes in and the patient feels relief. You exhale the rare breath of satisfaction knowing you actually helped; you fixed a problem, and you made a friend. However, about 25% of cases can be frustrating for various reasons and can produce unpleasant memories that persist for decades. Inadequate anesthesia is sometimes the scapegoat.

When the question of anesthesia for an anterior shoulder dislocation is raised on shift, three emergency physicians will offer three different techniques for reduction and three different anesthetic suggestions. This produces a 3x3 matrix of options, conjured up from bad experience and backed by no published evidence. Thus, the work by Hayashi et al, [Comparative efficacy of sedation or analgesia methods for reduction of anterior shoulder dislocation: A systematic review and network meta-analysis](#) provides a much-needed synthesis of existing evidence about the anesthetic portion of the matrix. A welcome finding is that based upon the available evidence, intraarticular anesthesia affords equal opportunity for successful reduction, equal control of pain, shorter length of stay, equal patient satisfaction, and no respiratory depression.

As always, the evidence is not perfect, but points toward the notion that when it comes to reducing an anterior shoulder dislocation, simple is better. (Just beware of those darn subglenoid dislocations.)