

## **Unforeseen hypoglycemia prior to an elective procedure**

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### **Story from the Front Lines:**

A middle-aged man with a history of type 2 diabetes, chronic low back pain, obesity, and hypertension presented to procedure clinic for management of back pain related to facet joint arthropathy. He had previously undergone medial branch blocks under fluoroscopic guidance with significant improvement in his pain. Given this, radiofrequency ablation was offered in hopes of providing more durable analgesia. He was instructed via standardized letter on the day prior to his procedure to take all of his medications except for aspirin. In the same letter, he was also advised not to fast prior to the procedure, but should instead eat a light meal.

On arrival his blood pressure was 191/95 mmHg. He also appeared fatigued and diaphoretic. The patient had taken only his insulin the day of the procedure, and had fasted overnight. A blood glucose level was immediately checked and found to be less than 30. The patient was given orange juice with resolution of his symptoms and the procedure was cancelled.

### **Teachable Moment:**

This case highlights a scenario in which harm was caused to the patient even before the procedure in question was performed. Despite written instructions meant to optimize his safety, the patient suffered a potentially life-threatening adverse event. Multiple pitfalls in our medical system and our communication with the patient are evident in this scenario. However, it is also important to discuss the elective procedure itself, and the overall long-term benefits in the setting of such risks.

Chronic low back pain is a common condition with numerous proposed therapeutic interventions, yet management in the form of spinal injections and radiofrequency ablation is of uncertain benefit. The most recent Cochrane review on the subject indicates there is limited evidence in the short-term effects of radiofrequency ablation in chronic low back pain.<sup>1</sup> Although small studies do exist assessing short-term improvement in quality of life and disability, the studies lack the power to determine the long-term effects of such a procedure.<sup>2</sup> A 2014 systematic review does reveal the effectiveness of RFA in short-term pain reduction, but again the long-term efficacy of these interventions has not been adequately studied.<sup>3</sup> Another systematic review article does indicate that lumbar facet joint nerve blocks may induce short- and long-term pain relief and functional improvement. However the same review indicates that the evidence for radiofrequency ablation continues to have limited evidence in overall benefit for chronic low back pain.<sup>2</sup>

This case reminds us to factor in a patient's comorbidities when it comes to elective procedures with uncertain long-term efficacy given the potential for unforeseen and hard to predict adverse events. Though the risk of the procedure itself may be small, the circumstances leading to the procedure itself can be life-threatening.

References:

- 1) Niemisto, L (2003). "Radiofrequency denervation for neck and back pain. A systematic review of randomized controlled trials". *Cochrane database of systematic reviews*, (1), p. CD004058
- 2) Falco, Frank J E (11/2012). "An update of the effectiveness of therapeutic lumbar facet joint interventions". *Pain physician (1533-3159)*, 15 (6), p. E909.
- 3) Leggett, L et al (2014). "Radiofrequency ablation for chronic low back pain: A systematic review of randomized controlled trials". *Pain Res Management*. 19 (5): e146-e153.