Administering Dexamethasone Prior to Peripheral Nerve Blocks

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Abstract
Post-operative pain creates burdens for the patient and their family members while also drastically increasing the price of cost to the healthcare system. The Institute of Medicine Committee on Advancing Pain Research, Care, and Education states that the annual economic cost of chronic pain in adults is $560-630 billion (IOM, 2011). Regional anesthesia has been shown to provide potent analgesia that often times leads to a reduction in systemic analgesic requirements, opioid related side effects, general anesthesia requirements, and possibly the incidence of chronic post-operative pain. There are several adjunct medications that can be combined with peripheral nerve blocks to prolong the duration of action and provide longer periods of analgesia. Dexamethasone is a glucocorticoid that has been shown to increase the efficacy of peripheral nerve blocks during the post-operative phase of surgery when administered intravenously.

An informal survey was performed at a hospital in the southeastern portion of the United States among anesthesia providers revealing that dexamethasone was not being administered when performing peripheral nerve blocks. A quality improvement educational project was performed from literature supporting the project. A pre-intervention survey was implemented followed by the presentation. A post-intervention was then provided to the participating anesthesia providers and the results of the two surveys were then compared. The results showed an increase in the number of providers who administered dexamethasone intravenously prior to peripheral nerve blocks. A majority of the participants stated that the intervention influenced their decision to administer intravenous dexamethasone when performing peripheral nerve blocks.