Dexmedetomidine for refractory suffering at end-of-life

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Introduction: Dexmedetomidine (DEX) is a highly selective α-2 agonist with hypnotic and mild analgesic properties. It has a long history of use to achieve moderate and deep levels of sedation for pediatric procedures. Emerging evidence suggests that DEX may have a role in the management of refractory suffering at end-of-life. We present a clinical case with a brief review of the literature on its use in pediatric patients at end-of-life and suggest future considerations.

Methods: IRB approval was waived and the medical record was reviewed posthumous to provide a descriptive account of the clinical use of DEX. Data was collected on patient diagnosis, DEX dose and duration, concurrent analgesic medications, reported pain scores, and neurologic status throughout the duration of the infusion.

Results: The patient had a diagnosis of widely metastatic adenocarcinoma of unknown primary that was refractory to treatment. He was admitted for intractable abdominal pain with rapidly escalating opioid requirements via PCA. Pain was well controlled with addition of IV ketamine infusion. However, on HD #3, pain escalated despite up-titration of the ketamine infusion and a trial of IV lidocaine infusion. Subsequently, a DEX infusion was initiated with improved pain control. The patient slept well after initiation of the infusion but remained arousable. An intrathecal catheter was eventually placed to maximize pain control while allowing him to remain maximally alert and interactive per his wishes.

Discussion: Dexmedetomidine may be a useful agent in the management of refractory suffering at end-of-life. There are reports in the literature on its use to facilitate sleep and withdrawal of respiratory support as well as to manage dyspnea, pain, and delirium. Additional studies are needed to better define the optimal role of dexmedetomidine at end-of-life.

References: