ABSTRACT

Objectives: To verify the efficacy of intranasal ketamine as a sedative agent for venous access in children.
Method: Randomized, double blind, placebo controlled study conducted at Hospital de Clínicas de Porto Alegre (Brazil) between November 2015 and August 2016. Children needing venous access were randomized to receive intranasal ketamine (4mg/Kg) or normal saline solution (Placebo group). Groups were compared regarding the time for venous access, facility for performing the procedure, adverse events, disturbances in vital signs, and perception of the accompanying adult. The study was approved by the Local Ethics Committee.
Results: 39 children (21 Ketamine; 18 Placebo) were included without differences regarding age, sex, weight, reason for hospitalization, and professional experience. The median age was similar (19.8 x 15.8 months), as well as the median weight (10.0 x 11.3Kg). Ketamine reduced the length for venous access (23.0 x 67.5 seconds; p=0.01), and facilitated the procedure (p=0.00009). Ketamine induced sleepiness 15 minutes after its administration (p=0.003) and reduced the number of people for the child’s restraint (p=0.025). No difference was verified between groups regarding adverse effects or vital signs disturbances. Side effects were observed in 29% of the children in the Ketamine group and 17% in the Placebo group, irritability being the most common for both. The accompanying adult reported that 81% of children in the Ketamine group were calm and quiet (p=0.0003).
Conclusions: Intranasal ketamine (4mg/Kg) reduces the time for venous puncture, facilitates the procedure to the nurse, decreases the number of people involved and provides a tranquil environment.
Keywords: Ketamine; venous access; pediatric nurse; intranasal administration.