

Safety and Efficacy of Chloral Hydrate Sedation in Paediatric Sedation for Ophthalmic Procedures

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Abstract

Introduction: Chloral hydrate (CH) sedation is routinely used in paediatric ophthalmic examination in Singapore as an alternative to examination under general anaesthesia. Despite CH's traditionally high success rates and relatively low rate of adverse events, there is little data on its safety and efficacy as a sedative for ophthalmic procedures in an Asian population. **Materials and Methods:** A retrospective chart review was performed, including children who underwent CH sedation at the Singapore National Eye Centre from January 2012 to January 2015. Participants were given an initial dose of CH and a top-up dose if required. Univariate and multivariate analyses were performed on data collected. **Results:** CH sedation was successful in 144 of 153 children (94.1%). Of the 20 (13.0%) who required a top-up dose, 4 failed to sedate. The mean sedation onset was 29.4 minutes (SD: 24.3) and mean sedation duration was 56.5 minutes (SD: 24.0), with more than a third lasting more than 1 hour. The age of children, rather than initial dose of CH, was more relevant in determining success of sedation. Children who were >6 years old were 20.3 times more likely to fail sedation than those aged <2 years. During sedation, depression in the heart rate and a transient reduction of oxygen saturation was documented. All children recovered well post-sedation. **Conclusion:** CH is a very useful sedative for paediatric ophthalmic procedures, especially in younger children. Children over 4 years old were more likely to fail sedation and require top-up doses. Alternative means of sedation may need to be considered in these cases.

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