Ask the Experts

What is the role of Chloral Hydrate in the sedation of children undergoing diagnostic procedures such as CT?

Answer

The medication, which has been discouraged by the AAP, is still very much in use. (See Radiology, Dec 2002).The medication does have its advantages. Easily given by the oral and rectal routes, it is a drug that has been used for eons. It is metabolized by the kidneys.
The disadvantages are protean and that is why it has been surpassed by newer agents. It has a horrid taste and rectal absorption is poor. A metabolite of the drug is a known carcinogen, but this is unlikely to be a consideration in one time use. While the drug can cause vomiting, liver failure, areflexia, delirium, GI bleeding and arrhythmia at its toxic levels, the biggest problem is its erratic effect with long term sedation. This is common at higher doses - it can even cause hypoventilation. One of its main problems is its unpredictable onset of action and long term sleep or sedation, often lasting long after the procedure is completed. Cases of hypoxia, hypoventilation and death, as a result of upper airway obstruction, have been reported in which infants "kinked" their upper airway due to flexion of the head while seated asleep in the car on the way home.
Propofol is a great drug that has been maligned in the ICU but one time use in the ED is probably safe. Midazolam is a good choice, although palatable oral preparations, which are available in the USA, are not available here. It is, of course, reversible, but it has a half life of 2 hours.

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How can we minimize our missed MI rate?

Answer

Unfortunately, the "quixotic search for certainty" has led us to admit enormous numbers of extremely low risk patients - but there's no evidence that this has in any way decreased the percentage of false negatives (patients with AMI who are discharged). The problem is that there is nothing one can depend on to "rule out" AMI with greater certainty than 98-99%. Response to nitroglycerin, pleuritic or positional pain, local tenderness, absence of traditional risks, etc., range from being of no value, to being somewhat helpful. But none of them, alone or in combination, are anything close to perfect. Being aware that certain subgroups, including the elderly and women, are even more likely to present with vague or atypical symptoms, can be helpful - but it won't come close to solving all our diagnostic problems. Remember that some MIs are actually silent!
There is simply no way to be 100% sure of the diagnosis of myocardial infarction. This can also be stated as: "the only way you'll never miss such a patient is to stop seeing patients altogether!" While none of us wants to miss even an occasional MI - as a general principle we should, of course, err on the side of caution - this is not best dealt with by admitting each and every patient who shows any remote possibility of having the illness.

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