Ketamine safe way to sedate kids for medical scan

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By Martin F. Downs

NEW YORK (Reuters Health) - Ketamine is best known as an anesthetic vets use for surgery on cats, and as an illicit drug popular in the dance club scene. But some doctors say it is also good for sedating children during medical procedures.

At Brookdale University Hospital in Brooklyn, New York, doctors studied the effects of ketamine on 1,276 children, ranging in age from 2 months to 12 years. They injected the children with small doses of the drug before they underwent MRI or CT scans.

Children are routinely given some kind of anesthetic for these procedures; not because there's any pain involved, but because the experience can be frightening. "A 5-year-old kid isn't going to stand it if you put him in a scanner," lead author Dr. Thomas Crimi told Reuters Health.

Few of the children had side effects from the ketamine. The most common were nausea and vomiting, which occurred in 23 kids. Only seven experienced delirium or hallucinations, which were described as "mild," and which went away in a few hours.

"Ketamine was used extensively in the past," co-author Dr. Rafik Michael said in an interview. It fell out of favor with doctors because of the delirium and hallucinations, which are more common and more severe at higher doses. "Ketamine came back," he said, but many doctors are still afraid to use it because of these notorious effects.

Michael said the purpose of the study was to show that ketamine is not only safe to use on kids, but in some ways it's better than other anesthetics. "For short procedures it is a very good, effective drug," he said.

One reason is that the injection, given in the shoulder muscle, is "just a pinprick." Michael said parents tend to be more concerned about how their child is anesthetized, and less so about what drug is used. "Parents need to see the child not suffering," he said. "The child doesn't suffer from the injection, or even trying to find an intravenous line."

With ketamine there is also no need for a breathing tube, which may be necessary with some other drugs. "The patient can just breathe room air or a little oxygen," Michael said. "There are no tubes; there is no anesthesia machine."

What's more, the Brookdale doctors argue that ketamine can save time and money. "Our problem is cost-effectiveness," Michael said. Patients who have to stay and

recover from a long-lasting anesthetic tie up hospital resources. "If every patient stays 3 to 5 hours, this would be a problem." With ketamine, he said, "after 20 minutes you go home."

At the dosage given to children in the study, the drug started working in about 2 minutes. Small children were held on their parents' laps when they got the injection, then taken to the scanner once the drug kicked in. The effects wore off in 20 minutes, on average. Some kids whose scans took longer than others got another shot of ketamine to keep them under. In these cases, the drug's effects lasted an average of 30 minutes.

"It's a very soothing, participatory process for the parents," Crimi said. "We found out when we did post-op callbacks that the parents were very satisfied, and we find no lingering effects for the child."

The study data were presented this weekend at the New York State Society of Anesthesiologists' 56th Postgraduate Assembly in Anesthesiology.