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THE CHECKUP

Balancing the Risks and Benefits of Opioids for Children

Experts say opioids are sometimes warranted for kids, in cases like severe burns or major trauma. But doctors should prescribe carefully, and parents should never keep leftovers in the house.

By Perri Klass, M.D.

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In a new survey of more than 1,000 parents by the American Society of Anesthesiologists, more than half were worried about opioid addiction, but almost two-thirds thought that opioids were the most effective pain medications for a child to take after a fracture or an operation.

Experts in pediatric pain want parents to understand that there are effective alternative pain management strategies for many situations, and they should review them carefully with their children's doctors. Opioid drugs do have a place in pain management, and if used properly, they should not pose a danger of addiction. And publicity around the opioid epidemic should not get in the way of prescribing the most effective drugs to children with serious illnesses and terrible pain.

Dr. Linda J. Mason, a professor of anesthesia and pediatrics at Loma Linda University and the president of the society, emphasized that parents should understand that "there are alternatives to opioid pain management" and that they should be asking questions of their children's doctors. And when children do take opioid medications, Dr. Mason said, parents need to understand how the medicines can be safely stored, and how any leftover doses can be disposed of.

"Opioids are very potent relievers of pain, very effective," Dr. Mason said. "But they have addictive properties, and also side effects, like respiratory depression." When she takes care of a child having surgery, Dr. Mason said, she may start with opioids and then move on quickly to other drugs.

Dr. Elliot J. Krane, professor of anesthesiology and pediatrics at Stanford University and chief of pain management at the Packard Children's Hospital at Stanford, noted that the pain-relieving properties of opium poppy plants were discovered 5,000 years ago, in ancient Mesopotamia. "Why are we still using a 5,000-year-old drug? Because they work," he said.

But they are also drugs with dangerous side effects, including respiratory depression, and they raise serious issues of abuse and addiction.

Some studies have shown connections between prescription opioid use in the young and later misuse; Dr. Krane and his colleagues have argued that the data do not support this as a causal relationship, and that the risk of addiction is tied to genetic and psychological vulnerability and not merely exposure. He was a co-author of a 2018 editorial in the journal Pediatrics that called for collecting much more data about the use and misuse of opioids in children.

Dr. Krane said that he and his colleagues avoid opioids when there are alternatives, because of concern about side effects. In an email he wrote that, as one of his colleagues says, he is "neither pro-opioid nor anti-opioid, but pro-patient." He wrote: "A very small percent of my chronic pain patients are prescribed opioids, no more than five to 10 at any time out of many hundreds of children and teens in my patient panel."

But he argued that, based on the data on misuse and addiction, "in the absence of risk factors or concerns about the child's home environment, I am more concerned about deleterious effects of untreated pain than I am about creating somebody with substance abuse disorder." And opioid abuse is not an overriding concern, he said, "in children or adolescents who are prescribed them rationally and appropriately."

There is definitely a new onus on doctors to make sure that the prescribing is rational and appropriate, especially around some of the most common situations in which opioids are prescribed, including dental procedures, orthopedic procedures and emergency room visits.

Of course, the prescribing doctor should know if a patient may be especially vulnerable to addiction, whether because of warning signs in the family history, psychiatric disease or adolescent experimenting.

"Traditionally, oral surgeons tended to be among the highest prescribers of opioids to adolescents," said Dr. Charles Berde, the founder of the division of pain medicine at Boston Children's Hospital. With the proactive use of acetaminophen and ibuprofen around the clock, he said, most adolescents who had their wisdom teeth extracted did not need any oxycodone at all. And for those who do, he said, "four pills is enough to cover the great majority of kids."

In the past, Dr. Mason said, children were often prescribed too many pills, which can contribute to the risk of using the medication longer than strictly necessary, and to leftover doses remaining in the medicine cabinet.

“You should not keep them for use for a future time,” Dr. Mason said. “These are for a specific surgery,” and any that remain should be disposed of, not left around to be perhaps used by another family member, or found by an exploring toddler — or visiting adolescent. She recommended taking them to a local pharmacy or health center, or to a police station, or else mixing them with dirt or kitty litter before throwing them away.

A study published in December in JAMA Pediatrics found a threefold increase in the mortality rate among children and adolescents from opioid poisoning, both by prescription drugs and by illicit drugs, over the past two decades. In addition to deaths among adolescents, the rate increased markedly among children under 4, underscoring the need to store these drugs safely and dispose of any leftover doses.

Pediatric orthopedists are looking at whether children need any opioids at all in certain situations, said Dr. Joshua M. Abzug, the director of pediatric orthopedics and deputy surgeon in chief at the University of Maryland Children’s Hospital, who was the co-author of a 2018 review article on managing pediatric orthopedic pain in the setting of the opioid epidemic. And when they do need them, he said, doctors should limit the prescriptions to only the few pills that the child is likely to need.

It’s important to start at the preoperative evaluation, Dr. Abzug said, and set expectations with both the child and the parent, acknowledging that the child may have some pain, but it should not be overwhelming, and “we can combat that pain with other medications.”

Important strategies for orthopedic surgeries, he said, include long-acting injectable local anesthetics, which can decrease the need of opioids, and multimodal pain relief by mixing different kinds of drugs, such as acetaminophen and nonsteroidal anti-inflammatory agents, like ibuprofen.

“If the child does need an opioid, that’s O.K., we don’t want them writhing in pain,” Dr. Abzug said. The child should then shift, as soon as possible, to other medications.

And while everyone is profoundly aware of the risks associated with opioids, the most important message of pain management is that pain needs to be managed. “Treating pain adequately helps recovery, reduces the downstream psychiatric and psychological effects,” said Dr. Krane.

Not treating pain adequately may cause post-traumatic stress disorder, said Dr. Stefan Friedrichsdorf, the medical director of pain medicine and palliative care at Children’s Minnesota. Opioids are important for children after major surgery, trauma or burns, he said, and certainly for those in palliative care,

Parents whose children will need pain control — after an injury, after an operation, after a dental extraction — should ask questions, Dr. Abzug said. Even for injuries like bone fractures, it is often enough to alternate anti-inflammatory medications and acetaminophen.

Ask about options, ask about local or regional anesthesia, ask about who will be available if the pain medication — whatever it is — proves insufficient.

And after considering all the alternatives, if opioids are necessary, parents need to be vigilant about supervising the dosage, and properly disposing of extra pills.

Dr. Mason suggested asking, “What would be good for my child’s pain as we transition out of the first 24 hours?” Ask about the side effects, she said, ask about what to do with drugs that are left over. “Parents who are well-informed can give the best care to their children.”

This is the fourth in a series of columns on children’s pain. The first is on pain after surgery; the second is on pain from needles and the third is on chronic pain.