

CT use up for children with abdominal pain seen in ER

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For children presenting to the emergency department with abdominal pain, there was a dramatic increase in computed tomography use from 1998 to 2008, according to a study published online Oct. 8 in *Pediatrics*.

(HealthDay)—The use of CT scans on children being brought to emergency rooms with abdominal pain has skyrocketed, new research reveals.

"CT scans among children coming to the ER with abdominal pain have gone off the charts," said study author Dr. Jahan Fahimi, an attending physician in the department of emergency medicine at Alameda County Medical Center Highland Hospital in Oakland, Calif. "We found that in 1998, probably in part as a result of fewer CT scans being available to doctors, less than 1 percent of these children underwent CT scans. But now, a decade later, that has gone up to 15 percent," he explained.

"That being said, there's been no change in the number of children

coming in to ERs, or the proportion of the number of kids coming in with abdominal pain, or the number of kids that are being hospitalized," Fahimi noted. "And no change in the number of X-rays or ultrasounds being performed. So this does raise the question of why this is happening."

The finding could ring public health alarm bells, given increasing concerns in the medical community about how exposure to the kind of radiation emitted by such scans may boost cancer risk among these young patients.

Fahimi, who is also an assistant professor at the University of California, San Francisco, reports the findings online Oct. 8 and in the November print issue of *Pediatrics*.

To get a snapshot of current pediatric CT scan use, the team crunched numbers collected by the annual National Hospital Ambulatory Medical Care Surveys, spanning the period from 1998 to 2008. The survey paints a nationally representative portrait of all visits to most of the nation's emergency departments.

The authors focused specifically on those children under the age of 19 who showed up in an emergency department with a primary complaint of abdominal pain, including symptoms such as cramping, spasms and general discomfort.

The result: of the nearly 92,000 pediatric visits to emergency departments in the study period, 6 percent were found to have involved abdominal pain, and most of these patients were female adolescents and teens.

Yet despite the fact that the number of abdominal pediatric emergency department visits remained more or less stable across the study period,

the team observed that, among all the diagnostic tools available to hospitals, only CT scan use went up dramatically.

"Now, while there are many possible reasons why this is the case, this study isn't designed to be able to tell us why," acknowledged Fahimi. "I can only postulate. But I have a hard time believing we are providing that much better care today than a decade back. I think it's likely that we've introduced a new technology into medical practice, made it widely available, and in many ways it's become a crutch of emergency medicine. Of course, people think we really need to evaluate these kids thoroughly. And CT scans can do that. But that might mean that there's now almost a knee-jerk reaction toward using this technology," he added.

"Whatever the reason, I am by no means saying that CT scans are a bad test or that parents should be fearful," Fahimi stressed. "In fact, they are very powerful tests that provide a lot of clarity. At the same time, in terms of radiation, we know that some long-term risk may exist. We don't yet know what those risks are in real terms, but there is that potential," he continued.

"So I think physicians really need to question, for every case coming in, whether a CT scan is truly needed," Fahimi stated. "And parents need to be involved in that discussion."

Dr. Marta Hernanz-Schulman, chairwoman of the American College of Radiology Pediatric Imaging Commission and a professor of radiology and pediatrics at Monroe Carell Jr. Children's Hospital at Vanderbilt University in Nashville, Tenn., said that "the best way to look at this paper is as a warning to make sure that we look at our own practice and we do not do CT scans that are not indicated." Hernanz-Schulman was not involved with the study.

"Parents should never be shy, and should always feel comfortable asking questions on behalf of their children in the ER," Hernanz-Schulman said. "And there always needs to be a justification for the procedure. That it's necessary, and that there isn't another procedure that would give you similar information without resorting to a CT scan," she added.

"On the other hand, if you need a CT you really should have it," she said. "Because an alternative can be much worse. For example, let's assume that all the potential risks are real, and you have a one in 'x' chance of developing cancer from a head CT. In that case, if you don't have anything wrong with you having a CT scan is a chance you didn't need to take. On the other hand, if you have a blood clot just outside the brain your chances of dying if you *don't* know about it are about 100 percent," she explained.

"So if you need a CT scan you should have one," Hernanz-Schulman added. "And people should not be so scared of the potential risks, risks which this study doesn't prove one way or another."

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