Group refines existing opioid misuse risk assessment tool

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FORT LAUDERDALE, FLA. – Analysis of data from more than 13,000 patients at a large pain management practice shows that a self-reported history of sexual abuse and issues with anger, impairment of life control, marital status, and level of education are among predictors of patients' tendency to misuse opioids.

Dr. Mark Gostine

The physician group, led by Dr. Mark Gostine, is planning to use the findings to help refine the specificity and sensitivity of an existing opioid risk assessment tool called the Opioid Risk Tool (ORT).

"What we're trying to do is to take ORT 1.0 and create ORT 2.0," said Dr. Gostine, president of Michigan Pain Consultants in Grand Rapids.

The ORT was developed by Dr. Lynn Webster with the aim of identifying patients at risk of misusing opioids (Pain Med. 2005;6:432-42). The questionnaire seeks personal and family history of substance abuse, history of preadolescent sexual abuse, and a history of certain psychological disorders.

"The Gostine study is a significant contribution because of the number of subjects in the analysis," said Dr. Webster, who was not involved in the study. "I'm not aware of any opioid risk tool that has been evaluated in such a large population. It supports the risk factors that are identified in the Opioid Risk Tool but also suggests that the ORT could be improved with some modification."

The abuse of prescription drugs and overdoses stemming from their use became one of the top public health concerns starting in the 1990s. Their abuse continues to be the fastest-growing drug problem in the United States (MMWR 2012;61:10-13). The increase in unintentional overdoses has been mostly driven by opioids in recent years, according to the Centers for Disease Control and Prevention.

Physicians at Michigan Pain Consultants have been using the five-question ORT as part of their 120-question Pain Health Assessment that they give to chronic pain patients on an iPad prior to seeing the doctor. The form assesses disease presence, pain characteristics, physical function, and psychosocial function.

"Anybody with a high ORT score had a problem with narcotics," said Dr. Gostine in an interview. "However, two-thirds of the patients who misused narcotics had low ORT scores. So we wanted to find out what other elements in our database indicated that these patients are problematic, and can we use that to predict which patients will misuse medications."

They conducted an analysis of observed behaviors associated with narcotic misuse and/or patients on high-dose narcotics. Dr. Gostine and his colleagues identified "miscreants" (256 patients) as patients who were flagged by the Michigan Automated Pharmacy Surveillance Program, had abnormal urine drug screens, had problems managing opiate prescriptions, and/or had poor behavior with clinic staff regarding opiate prescriptions. They also identified an additional 704 patients who consumed a high dose of narcotics, defined as greater than 100 mg of oral morphine equivalents per day. The investigators then compared the data on these two groups with the rest of their patient population (n = 13,026).

The investigators found a higher ORT score significantly more often among people with miscreant behavior (11%) than among those with high-dose opioid use (5%) or controls (4%). Low ORT scores occurred in 66% of individuals with miscreant behavior, compared with 73% of people in the high-dose group and 82% of the control group, Dr. Gostine said at the annual meeting of the American Academy of Pain Medicine.

The results also showed a correlation between the distress index – which uses a Likert-type numerical scale to score responses to questions relating to anger, depression, anxiety, and life control – and those identified as miscreants and those who consumed high doses of narcotics.

In addition, a history of sexual abuse was associated with being a miscreant (14%) and high-dose consumer (12%), compared with the control group (8%). "Two other factors emerged: Marital status seems to be predictive, and patients with a higher level of education seem to be less likely to misuse," said Dr. Gostine. "Never married increases the risk of being a miscreant by 100% versus currently married. With our large numbers of miscreants and controls, this is highly significant, but these are early, provisional numbers."

He added that the rate of miscreant behavior among high school graduates is 50% higher than that of 4-year college graduates. "This is also significant, but these are provisional numbers," he said. "We have also confirmed the link with smoking and prescription drug misuse. Smoking almost doubles the risk of opioid misuse, again a provisional number, which we will look at in more detail with the larger numbers [1,800] we have now accrued."

Dr. Gostine said that he is planning to publish the findings. After refinement of the ORT, which is currently in the public domain and available to physicians, the tool might expand to 15 questions – a short-enough questionnaire that patients can fill out in 2 or 3 minutes. If the questionnaires are fed into electronic medical records, as they are in Dr. Gostine's practice, "the doctor can find out whether [the patient] is someone they should be nervous about or someone they can trust" when it comes to prescribing opioids.

Dr. Gostine and his partner, Dr. Fred Davis, developed the Prism Pain Health Assessment that was used to capture and analyze the data. The product is now commercially available. Dr. Webster has received honoraria/travel support from AstraZeneca, Covidien Mallinckrodt, and other companies.

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