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Research examines effects of opioids on patients with sickle cell disease

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Researchers from Virginia Commonwealth University (VCU) sought to shed light on the biopsychosocial and spiritual effects of taking prescribed opioids to treat noncancer pain. Such questions have received little examination and impact the challenging decision of when and how to use opioids, the study authors wrote in a scientific poster presented today at the 29th Annual Meeting of the American Academy of Pain Medicine. They found that taking opioids had many and diverse consequences for patients in terms of biological, psychological, social and spiritual functioning.

The multi-phase study, using primarily semi-structured, qualitative interviews and some quantitative components, gathered data from 21 African-American adults with sickle cell disease (SCD). SCD is an inherited blood disorder, and pain is a primary symptom. The average age of participants was 36 years old, and their demographic and socioeconomic statuses varied.

Wally R. Smith, MD, served as senior author on the study, and Abdulkhaliq Alsalman, MS, was lead author and Dr. Smith's graduate student at VCU located in Richmond, Va.

"From my research in pharmacotherapy, I realized that there was a paucity of research available about pain management and the chronic use of opioids in SCD," Mr. Alsalman said. "Also, I have personal experiences with family and friends who have chronic pain. I saw the impacts of their pain and concomitant opioid use. I saw the need to

describe not only multiple individual effects of opioid use, but also a holistic picture of opioid use on patients' daily lives."

Using recorded interviews, resultant effects of prescribed opioids were first transcribed then classified into 1 of 5 effect domains: biological, psychological, social, spiritual and miscellaneous. Further, within each domain, effects were categorized as either negative or positive. However, not all patients interpreted effects as uniformly positive or negative. Different patients sometimes gave opposite interpretations and terms to the same effect. Effects mostly interpreted as negative included social withdrawal and feelings of guilt. Positive effects included independence from pain and avoidance of pity or sympathy. Divergent effects were reported on relationships, productivity in school or work, mood, social and spiritual commitments, outlook and demeanor.

"We found divergent effects of prescribed opioids in various domains among SCD patients, which likely modulate subsequent opioid taking behavior," the authors wrote. "In all types of effects, biological effects appeared to be mediators of more indirect effects which led to alterations in subsequent opioid taking behavior." For example, respondents noted opioid-induced drowsiness or inability to concentrate, which led to avoidance of prescribed opioids for even severe pain when patients had pressing family, work or religious obligations. These effects were in turn sometimes viewed as positive (e.g., ability to complete required duty), sometimes as negative (e.g., uncontrolled pain resulting in hospitalization).

The data were analyzed using a grounded theory approach. Grounded theory is common to social sciences and assumes almost no knowledge and the need to generate hypotheses. It draws on empirical data, which is then used to generate hypotheses or build a new theory.

Questions surrounding opioid use are significant for SCD patients.

Virginia Smith, FNP, and research coordinator, stated, "I have provided care for cancer patients in their homes and for sickle cell patients in the hospital and the clinic. I have observed that patients with cancer usually experience pain, especially unrelenting or unrelieved pain, for a few weeks or months. However, for sickle cell patients, pain is a life-long journey. One of their fears is that the pain medications at some point will not continue to be effective in relief of their pain."

Armed with this research, the team is building and validating a quantitative survey that catalogs the above effects, with the goal of an adequate appreciation of the various consequences of prescribed opioids. The quantification of effects is expected to help guide prescribing decisions and rigorous testing of new hypotheses that may challenge current models of opioid-taking behavior.

"Prescribed opioids may be overused in the eyes of some physicians or underused in the eyes of others," Dr. Smith said. "We uncovered the need to describe and anticipate both underuse and overuse, linked to biopsychosocial-spiritual effects. We believe our research will facilitate better doctor-patient communication, raise providers' cultural sensitivity to patients' preferences, center prescribing behavior around patients' rather than providers' needs and, ultimately, improve quality of life for patients."

Provided by American Academy of Pain Medicine

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