Nurses’ Attitudes and Practices in Sickle Cell Pain Management


Professional objectivity should be the primary focus of patient care. Health care professionals are at times reluctant to give opioids out of fear that patients may become addicted, which would result in the undertreatment of pain. The influence of nurses’ attitudes on the management of sickle cell pain was studied. The variables of age, education, area of practice, and years of active experience were considered. Of the respondents, 63% believed addiction was prevalent, and 30% were hesitant to administer high-dose opioids. Study findings suggest that nurses would benefit from additional education on sickle cell disease, pain assessment and management, and addiction. Educational recommendations are discussed.

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SICKLE CELL DISEASE (SCD) is a chronic hematological disorder that is characterized by the production of hemoglobin S in the erythrocyte, vaso-occlusion, and hemolytic anemia. Hemoglobin S differs from normal hemoglobin A by a single amino acid substitution of valine for glutamic acid at the number 6 position of the beta chain on chromosome 11. Chronic hemolytic anemia, recurrent vaso-occlusive pain episodes, acute and chronic organ damage, and increased susceptibility to infection characterize SCD. Periodic, self-limited episodes of excruciating pain that involves the long bones, abdomen, chest, and back consume the lives of patients with SCD (Platt et al., 1991). Of sickle cell anemia patients, approximately 60% of individuals will have an episode of severe pain each year, and a small minority have severe pain almost constantly (Steinberg, 1999). Some patients have frequent vaso-occlusive pain episodes and require multiple hospital admissions, whereas other patients infrequently experience pain and rarely require hospitalization (Martin & Moore, 1997; Platt et al., 1991). Variability is the hallmark of sickle cell pain episodes.

In SCD, recurring pain episodes are the most common reason for medical evaluation. The number of pain episodes per year in SCD has been shown to be an indicator of clinical severity and to correlate with early death in patients over 20 years of age (Platt et al., 1991). Although more than 75 million people present to practicing physicians each year with some form of persistent or recurrent pain (Caudill, Holman, & Turk, 1996), it is often difficult to assess, define, describe, and manage.

Patients with SCD-related pain receive care within a complicated and extensive sociocultural system that is shaped by the beliefs and attitudes of the patient, family, community, and health care professionals (Shapiro, Benjamin, Payne, & Heiderich, 1997). It is important to understand that an individual’s perception and appreciation of pain are complex phenomena influenced by numerous variables such as coping mechanisms, chronicity, accessibility to health care, support structure, culture, age, and gender.

Additionally, an individual’s perception of pain involves psychological as well as emotional processes that may also activate pain pathways (Edwards, 1998). Although individualized pain management is an important aspect of patient care, the need for relief of pain, an acceptable level of functioning, the ability to live a normal lifestyle, and reassurance from their health care providers (Katz, 1998) is common to all patients who are in pain. For the health care provider to be most effective at meeting these needs, he or she must
respect the patient’s right, believe the patient’s pain history, and implement early and aggressive treatment. For conditions such as SCD where pain is often frequent and/or chronic, employment of a multidisciplinary approach is often needed and beneficial to the patient.

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Factors that are recognized in the management of pain include an array of interpersonal, educational, and social issues that affect the patient, family, and health care professional. These issues can be significant barriers to adequate assessment of pain and to effective pain management. **Attitude** is an example of an interpersonal factor. Many nurses develop their attitudes and beliefs about pain and the use of opioids in pain management from within their families, churches, communities, ethnic background, and values before they enter nursing school. Attitudes, beliefs, learned behaviors, and coping mechanisms may be entirely different for patients and health care providers, which results in inaccurate pain scores and undertreatment of pain (Beyer, Platt, Kinney, & Treadwell, 1999).

### The lack of understanding of the true incidence and definition of addiction and the fear of creating addicts in the management of sickle cell pain may lead to the mislabeling of patients as “addicts” and the unnecessary withholding of opioid analgesics (American Academy of Pain Medicine & American Pain Society, 1997; Schug, Merry, & Acland, 1991).

Concern regarding addiction in the management of sickle cell pain episodes is frequent (Shapiro et al., 1997); however, the incidence of addiction in SCD is only between 0.2% and 2% (Martin & Moore, 1997). **Addiction** is a compulsive disorder in which an individual becomes preoccupied with obtaining and using a substance, and which, if continued, results in a decreased quality of life (American Academy of Pain Medicine & American Pain Society, 1997). The lack of understanding of the true incidence and definition of addiction and the fear of creating addicts in the management of sickle cell pain may lead to the mislabeling of patients as “addicts” and the unnecessary withholding of opioid analgesics (American Academy of Pain Medicine & American Pain Society, 1997; Schug, Merry, & Acland, 1991).

The purposes of this study were to determine whether nurses’ attitudes influence their practice when caring for patients with sickle cell pain episodes and determine whether and/or describe how age, education, years of active nursing experience, and area of practice influence nurses’ attitudes and practices in sickle cell pain management.

### METHODS

The study was conducted at a southern university teaching hospital. The study population consisted of student nurses, licensed practical nurses, registered nurses, advanced practice nurses, and adult and pediatric health nurses. The study did not control for gender, scheduled shifts, or level of education. Adult and pediatric emergency departments and medical-surgical units were of primary interest because of the frequency and number of
sickle cell patients who were triaged and admitted to these units.

A written 31-item multiple choice survey was developed to obtain information on nurses’ attitudes and perceived barriers to pain management with opioids when caring for patients with sickle cell pain episodes. The survey was divided into three components: (1) attitudes, practices, and knowledge level; (2) perceived barriers to sickle cell pain management; and (3) demographic information. Some of the items in the first and second components of the survey were adapted from a physician survey that addressed attitudes and practices in the management of cancer pain (Von Roenn, Cleeland, Gonin, Hatfield, & Pandya, 1993). The number of items in each section was 14, 9, and 8, respectively. Responses to the questions on the surveys were recorded as either (a) disagree, no opinion, or agree; (b) never to rarely, often to always; and (c) most likely to least likely on a scale of nine to one. The survey was favorably reviewed by the Nursing Research Committee (composed of advanced practice nurses, unit managers, and staff nurses) for content validity before distribution. The study was approved by the Institutional Review Board, and permission was obtained from nursing administration to collect data. The survey was discussed with each participating unit manager, clinical nurse specialists, and resource nurses to obtain support to conduct the survey.

Two hundred surveys were distributed into the individual mailboxes of the nursing staff on each participating unit. The completed surveys were placed in a labeled collection box located at the nurses’ station on each participating unit. One hundred and six (52%) of the surveys were completed and collected over a period of four weeks. Participation was voluntary, and confidentiality of responses was assured.

STATISTICAL ANALYSIS

The correlation between the responses to two questions that addressed attitudes and four demographic variables were examined. The two survey questions were: (1) Does drug addiction frequently develop in patients who are treated for sickle cell pain episodes? and (2) Should drug addiction be the nurses’ primary concern when caring for a patient with sickle cell pain episodes? The variables considered in this survey were age, level of education, years of active nursing experience, and area of practice. Somer’s D and Spearman rank correlation coefficient statistics were used to examine the associations between the several pairs of ordinal variables of interest. Only the associations of age, educational level, and years of active nursing experience were significant (two-tailed test), using exact methods. Somer’s D was used because the associations of interest were asymmetrical: one variable (attitude) is dependent, and the second variable (demographic) is independent (Siegel & Castellan, 1988).

RESULTS

The number of returned surveys in which every question was answered was 77 (34%). The majority of the respondents were in the age ranges of 20 to 29 and 30 to 39 years (41% and 31%, respectively) and had either a bachelor’s or associate’s degree in nursing (50% and 23%, respectively). Seventy-four (70%) of the respondents had less than 10 years of active nursing experience. Eighty-three (78%) of the respondents were employed on a full-time basis, and the remaining participants were employed part-time.

The majority (63%) of the surveyed nurses believed that drug addiction frequently develops in the treatment of sickle cell pain episodes. One hundred and three (97%) of the surveyed respondents believed that individuals with SCD who are addicted to opioids can also have pain episodes. Ninety-four (87%) of the respondents believed drug addiction should not be a primary nursing concern when caring for a patient with sickle cell pain episodes. The belief that drug addiction frequently develops in the management of sickle cell pain episodes was inversely related to age, years of active nursing experience, and level of education. Area of practice was not significantly related to this belief. Using age as the independent variable, the belief that drug addiction frequently develops in the management of sickle cell pain episodes decreased with increasing age of the nurses ($D = -0.18$, $p = .02$). Fifty-two (49%) of the respondents who believed addiction was prevalent in the management of sickle cell pain episodes had between zero and five years of active nursing experience. Nursing education at the master’s level inversely correlated with the belief that addiction is prevalent in SCD. Fifty-one (49%) of the respondents reported not having broad knowledge of SCD. Spearman correlation identified a significant
association between nurses’ belief that drug addiction frequently develops in patients who are treated for pain episodes and that most sickle cell patients are drug addicts ($r = 0.57, p = .002$).

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The belief that drug addiction should be a primary nursing concern in the management of sickle cell pain episodes was influenced by age, years of active nursing experience, and education. None of the respondents older than 39 years of age believed that drug addiction should be a primary nursing concern in the management of sickle cell pain. The belief that drug addiction should be a primary nursing concern decreased significantly as the years of active nursing experience increased ($D = -0.1308, p < .01$).

Overall, the concern about addiction in SCD decreased as the age of the nurses increased ($D = -0.0931, p = .0564$). None of the respondents with more than 10 years of active nursing experience believed that drug addiction should be a primary nursing concern. The belief that drug addiction should be a primary nursing concern decreased significantly as the years of active nursing experience increased ($D = -0.1308, p < .01$). The belief that drug addiction should be a primary nursing concern decreased as the level of education increased ($D = -0.15, p < 0.01$), similar to age and years of active nursing experience. Area of practice had no influence on the belief that drug addiction should be a primary nursing concern in the management of sickle cell pain episodes.

In regard to nursing practice, the concern for addiction was “rarely to never” a factor that resulted in hesitancy to administer high doses of opioids for 70% of the respondents, whereas 30% were hesitant to administer high doses of opioids. Forty (39%) of the respondents who were “always to often” hesitant to administer high dose opioid analgesics believed there was not a true indication for opioid analgesics. Of the nurses surveyed, 50% did not think drug addiction was a barrier in the management of sickle cell pain episodes, whereas 33% did, and 17% had no opinion. It is noteworthy that 61 (59%) of the respondents reported that an inadequate pain assessment tool was the greatest barrier in the management of sickle cell pain episodes. The next most common barriers in the management of sickle cell pain were: lack of time to provide psychological support (58%), nurse reluctance to give opioids (37%), narrow range of available analgesics (37%), physicians’ reluctance to prescribe opioids (33%), and belief that most sickle cell patients are drug addicts (32%).

The least likely barriers identified in the management of sickle cell pain included: excessive state regulations of analgesics (27%), patient’s re-
luctance to take opioids (16%), and patient’s reluctance to report pain (10%).

DISCUSSION

The overall objective of this study was to assess whether and/or how nurses’ attitudes impact nursing practice in the management of sickle cell pain episodes. Age, education, and years of active nursing experience were found to influence attitude and practice in the management of sickle cell pain episodes. Area of practice, however, had no influence on nurses’ attitudes or practice. In this study, nurses believed drug addiction was prevalent in clients who were treated for sickle cell pain episodes but also recognized that addicted individuals with SCD could also experience a sickle cell pain episode. These findings are similar to those observed in a physician’s attitude survey that assessed physicians’ belief regarding the prevalence of drug dependency in SCD (Waldrop & Mandry, 1995).

Most health care providers view the pain of SCD as only a series of acute painful episodes separated by periods of being pain-free (Nichols, 1996). Although the pain of SCD does not represent an immediate life-threatening event, the degree of pain may be comparable to that of a myocardial infarction (Nichols, 1996). Generally speaking, there is an enormous amount of sympathy for patients with cancer pain, postoperative pain, or pain due to trauma. In contrast, health care providers often have difficulty relating to or understanding the pain of SCD. Alleyne and Thomas (1994) found that nurses have difficulty dealing with chronic illness such as SCD because patients do not “fit” the concept of the “sick role” in the way that patients with an acute illness might. This may explain why many of the nurses in this survey (62%) expressed frustration when caring for patients who experienced sickle cell pain episodes.

Nurses may be more likely to take the report of pain by patients with SCD less seriously than that of patients without SCD because of attitudes and beliefs about lifestyles and addiction (Vourakis, 1998). Nurses are obligated to acknowledge and respect the patient’s health beliefs and practices even when their own personal values and beliefs are different (Fielo & Degazon, 1997). Health care professionals generally overestimate the risk of opioid addiction in the pharmacological management of pain and believe addiction is prevalent in individuals with SCD (Shapiro et al., 1997). Sixty-six (63%) of the nurses in this study believed drug addiction was prevalent in individuals with SCD. Such beliefs are not supported by data. In fact, the incidence of addiction is believed to be less than 1%; generally stated as between 0.2% and 2% (Martin & Moore, 1997). Opioid addiction as a result of acute pain management is extremely low, and this concern should not be used as a reason to undertreat patients who are experiencing a sickle cell pain episode (Perry & Heidrich, 1982; Porter & Jick, 1980).

Regarding pain management, data from this study support similar observations made in a survey that addressed physician’s attitudes and practices in cancer pain management (Von Roenn et al., 1993). In both studies, inadequate pain assessment tools were thought to be the greatest barrier. Interestingly, patient reluctance to report pain and to take opioids was found to be the second most common barrier in the cancer pain management study, whereas patient reluctance to report pain and to take opioids was the least common barrier reported in this study. Concerns about excessive state regulations of opioids, which contributed to the reluctance to administer opioid analgesics, were also identified as a barrier. This suggests the need for more comprehensive physician and nursing education that addresses the legal ramifications of opioid administration. In addition, more education is needed to address the lack of understanding about the pharmacology of opioids and pain management.

Health care professionals cannot allow these obstacles and barriers to lead to skeptical attitudes or opinions regarding true pain as compared with drug abuse behavior. When critically evaluating uninformed physician and nursing bias, it stands to
reason that attitudes may impact negatively on patient care and create barriers to adequate and effective health care delivery. Such attitudes also explain in part why patients become resentful over time when they feel they must convince others that their pain is real.

IMPLICATIONS AND RECOMMENDATIONS

The findings of this study have important implications for the management of patients with sickle cell pain episodes and indicate that nurses and student nurses would benefit from further education in SCD, specifically related to the assessment of pain, pain management, and the incidence of addiction. Survey findings also suggest that continuing nursing education is imperative in order for nurses to be equipped to face the challenges of the future in dealing with health care issues as they relate to patient care, particularly in pain management. Educational opportunities such as unit-specific hospital orientation programs would be a prime mechanism to educate new staff nurses about SCD and its complications.

To provide patients with the best possible care, health care professionals must examine their attitudes, perceptions, values, and knowledge level in order to discover internal barriers in the management of pain. The challenge to health care professionals is to provide compassionate care and comfort in a changing and varied clinical, social, and financial setting. Although this study addressed age, education, area of practice, and years of active nursing experience, there must be an understanding that there are multiple other variables including issues of race, creed, and gender that can influence the decision-making process (Edwards, 1998). Only then can the most effective pain management intervention be employed. Patients with SCD are dependent on nurses and other health care professionals for education, counseling, and pain management. Patient surveys that address health care professionals’ attitudes and the patients’ perception of pain management would be beneficial. Professional objectivity, not personal values, attitudes, and beliefs, should be the primary focus of patient care.

REFERENCES


