PAIN IN DIABETES MELLITUS AND BRONCHOSCOPY PROCEDURES: BREAKTHROUGHS IN MANAGEMENT AND CARE

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Understanding pain and offering non-pharmacological approaches for comprehensive management is an important aspect of healthcare. Pain is a complex subjective experience involving sensory and emotional perception. To effectively manage pain, it is important for healthcare professionals to understand the underlying causes and mechanisms. Additionally, non-pharmacological interventions can involve music therapy to reduce pain and improve quality of life.

One important approach is to identify the underlying causes of pain. By knowing the cause, steps can be taken to address or reduce the pain. These two recent studies address important medical topics. The first study explains about diabetes mellitus (DM) and its associated pain complications, and the second study explains about the pain caused by bronchoscopy procedures as a commonly used pulmonary endoscopic method in the diagnosis and treatment of airway disorders. These two research studies provide a deeper understanding of how to profiling pain burden in patients with diabetes mellitus and how to manage the pain during bronchoscopy procedures with non-pharmacological therapeutic approaches using music.¹²

In the first research, a study was conducted to determine the characteristics, prevalence, and location of pain in type 2 diabetes mellitus and non-diabetes mellitus patients at Danurejan I Community Health Center in Yogyakarta. The results of this study showed that DM patients had the most common comorbidities, such as hypertension and obesity. A significant number of individuals with diabetes mellitus (DM) experience pain, particularly neuropathic pain, in their back. The back is a common location for neuropathic pain to manifest. Neuropathic pain in DM patients can result from various factors. One of the key factors is diabetic neuropathy, which is a complication of DM that affects the nerves. High blood sugar levels over an extended period can damage the small blood vessels and nerves, leading to nerve dysfunction or damage. This can result in symptoms such as tingling, numbness, or burning pain, which may be experienced in the back or other parts of the body. This study also found an association between diabetes mellitus and the incidence of neuropathic pain, but no significant association was found between diabetes mellitus and nociceptive pain. Several related studies were also mentioned in this journal to support these findings. The prevalence of pain in patients with DM ranges from 6% to 27%, with lower limb pain being more common in type 2 diabetes than type 1. Neuropathy is one of the frequent complications in people with diabetes, with distal symmetrical polyneuropathy being the most common
form. This study provides important insights for healthcare professionals in understanding and managing pain in patients with diabetes mellitus. On the other hand, the second research discusses bronchoscopy as an important pulmonary endoscopic procedure. Bronchoscopy has various indications in the diagnosis and treatment of airway disorders, including assessment of pulmonary infiltrates, detection of microorganisms, and diagnosis and staging of lung cancer. In this journal, there is a discussion of the two main types of bronchoscopies, rigid and flexible bronchoscopy, each of which has certain advantages and uses. The research also highlights the use of music as a non-pharmacological therapy to reduce pain and anxiety experienced by patients during bronchoscopy procedures. This study explains that the concept of music-induced analgesia involves activating reward circuits in the brain, including the nucleus accumbens and other areas associated with motivational functions and dopamine release. Multiple pathways, such as affective, cognitive and sensory, may influence the brain's response to music and produce analgesic effects. Research showed that the use of musicure (music therapy) during bronchoscopy procedures can be effective in reducing pain scores in patients. The study involved measuring pain scores before and after the application of musicure, and the results showed a significant reduction in the treatment group compared to the control group. This suggests that music can provide real benefits in reducing pain perception during bronchoscopy procedures. The concept of music-induced analgesia through activating reward circuits in the brain provides a better understanding of the mechanism of action of music therapy in reducing pain. However, this study has some limitations that need to be considered. One of them is the subjective assessment of pain, which can be influenced by individual factors and patient perception. In addition, there were differences in patient characteristics between the treatment and control groups that could affect the results of the study. Therefore, further research is needed with more objective measurement methods and a more comprehensive assessment of patient satisfaction. Overall, these two studies provide valuable insights into efforts to reduce pain burden in patients with diabetes mellitus and patients undergoing bronchoscopic procedures. In the context of diabetes mellitus, understanding the characteristics of pain in patients can help in better management. Meanwhile, the use of music as a non-pharmacological therapy in bronchoscopy procedures shows potential to reduce pain and anxiety in patients. However, further research is needed to gain a deeper understanding, as well as to overcome existing limitations, and provide optimal benefits for patients.

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