

CHAPTER 1

INTRODUCTION

Background and significance of research problem

Hepatocellular carcinoma (HCC) is one of the most common fatal malignancies. It causes an estimated 1,250,000 deaths each year in the world (Breda, et al., 1996; Reintgen & Sabiston, 1987). In North America and Western Europe, HCC is relatively rare. However, its prevalence is high in several regions of the world, notably sub-Saharan Africa and Southeast Asia, where it represents up to 50% of all cancers (Breda, et al., 1996; Lightdale & Daly, 1987).

In China, HCC is one of the most common cancers. Its morbidity is the third, just next to stomach cancer and lung cancer. According to epidemiological survey, its mortality is more than 26% of all cancers, causing an estimated 12,000 deaths each year in China (Wu, 1992). The incidence in men is significantly higher than in women. The report of men to women ratio is 6 to 1. Also, HCC is found frequently in people under 50 years of age (Tang, 1995; Wu, 1992). The majority of these people are males and in mid-career. They are bound with many family and community responsibilities. Prolong hospitalization influences their career and increase their economic burden.

Current common treatments for HCC are hepatectomy, transcatheter arterial embolization (TAE), and percutaneous ethanol injection (Makuuchi & Kawasaki, 1997; Thung & Gerber, 1992). Hepatectomy is the most common treatment and is an effective strategy that improving survival rate among early detected cases. At present, it is the most common treatment of HCC in China (Tang, 1995).

The First Affiliated Hospital and Cancer Center of Sun Yat-sen University of Medical Sciences (SUMS) are the two biggest hospitals in Guangdong Province, China. There were 639 patients undergone hepatectomy during 1994 to 1997, with 136, 163, 173, and 167 cases each year at the First Affiliated Hospital of SUMS (Report of the First Affiliated Hospital of SUMS, 1994, 1995, 1996, 1997), and approximately 200 patients undergone hepatectomy yearly at Cancer Center of SUMS (Report of Cancer Center of SUMS, 1997). The number of the HCC patients seems to be stable over the years.

Hepatectomy is accounted for its effectiveness on HCC treatment; however, many complications such as postoperative pain are inevitable. Usually, hepatectomy can be accomplished through a right subcostal incision because it provides an excellent exposure of liver (Flint & Polk, 1988). Such incisions cause trauma of the rectus abdominis muscle, internal and external oblique muscles, and transversus abdominis muscles (Hanto & Fischer, 1995;

Makuuchi & Kawasaki, 1997). Injury of these muscles induces severe postoperative pain. Such pain has a great negative impact on breathing, sleep and rest, and activities of daily living among the patients, especially within the first 48 hours after operation.

Pain is perceived as harmful stimuli for the majority of people (Holmberg, 1988). The perception of pain associates with an impression of tissue damage (Lesle, 1972, cited in Roberts, 1986). Thus, undergoing pain experience after operation induces the feeling of fear and anxiety among patients.

According to Maslow (1970), human needs are all necessary things required to maintain physiological and psychological homeostasis for human health and life. He categorized five levels of basic human needs in order of priority: 1) physiological needs, 2) safety needs, 3) love and belonging needs, 4) self-esteem needs, and 5) self-actualization needs. Needs must be met in order to achieve the stage of well-being.

Hepatectomy pain has an impact on normal pattern of breathing, sleep and rest, and activity of daily living which are basic physiological needs while fear and anxiety generated from the impact of pain on safety needs and love and belonging needs among patients. It is obvious that hepatectomy patients' physiological needs, safety needs, and

love and belonging needs generated by pain need to be responded thoroughly and individually, unless the higher level of needs such as self-esteem needs and self-actualization needs cannot be fulfilled. Thus, the stage of well-being among hepatectomy patients can not be possible.

Postoperative pain needs to be adequately controlled, unless postoperative complications such as atelectasis, hypostatic pneumonia, deep vein thrombosis, muscle wasting, pressure sore, urinary retention, prolong abdominal distention, and psychological distress can be anticipated (Carr, 1990). Anxiety and insomnia generated by pain will in turn increase the intensity of pain (Dale, 1993).

Pain relief is a responsibility of all health professions (Lander, 1990). Nurses play a key role in assuring adequate pain control, since they are responsible for regularly pain assessment, providing pain medications as well as pain relief strategies and evaluation of the effectiveness of pain control. Generally, pain management includes pharmacologic and nonpharmacologic interventions. Nurses should provide not only pain control medications to patients as prescribed appropriately but also carry out those nonpharmacologic interventions (Jurf & Nirschl, 1993; McCaffery, 1980).

In the First Affiliated Hospital and Cancer Center

of SUMS, narcotics such as Pethidine are commonly used. Nurses are also expected to provide some nonpharmacological techniques, such as preoperative information support, physical support, and emotional support to help the patients take control over pain. However, the patients' needs regarding hepatectomy pain have not been evaluated as well as whether nurse responses adequately fulfill such needs. Therefore, it is possible that the majority of the patients are left dissatisfied with their hepatectomy pain control.

Inadequate postoperative pain relief is a long-standing problem in clinical practice (Allcock, 1996; Donovan, Dillon, & McGuire, 1987; Good, 1996; Graffam, 1979; Mackintosh, 1994). The report by a working party of Royal College of Surgeons (1990, cited in Mackintosh, 1994) on postoperative pain indicated that the treatment of pain after operation in some British hospitals was inadequate. Numerous evidences show the underestimate of patients' pain severity among nurses (Browne, 1996; Dale, 1993; Field, 1996; Graffam, 1979; Hekmat, Burke, & Howell, 1994; Loyd & McLauchlan, 1990; Saxey, 1986; Walding, 1991; Zalon, 1993). According to Ketovuori (1987), 80% of patients suffered moderate to severe pain after operation. This finding was consistent with the study of Cohen (1980, cited in Carr, 1990) who found that 75.5% of patients suffered moderate to severe postoperative pain. The pain that cannot be

controlled effectively probably because the needs generated by pain of the individuals are not fulfilled.

To achieve the comprehensive care and fulfill the needs of hepatectomy patient with pain, identifying and responding to the needs of individual patients is necessary (Mackintosh, 1994). There was a study conducted to identify the needs of postoperative patients in Western country (Lauri, Lepisto, & Kappeli, 1997). However, no study has been found on the needs of hepatectomy patient with pain and nurse responses in China. Expression of needs and nurse responses to such needs between people in the western and the eastern are different due to the unsimilarity of culture and context. This study was conducted to describe the needs of hepatectomy patient with pain and nurse responses as perceived by the patients as well as the comparison of these two variables. Results from this study would help nurses aware of patients' needs and take into account the appropriate nurse responses to fulfill such needs in order to relief hepatectomy pain and eventually shorten their recovery phase and reduce their economic burden during hospitalization.

Objectives of the study

1. To describe the needs of hepatectomy patient with pain as perceived by themselves.
2. To describe the nurse responses to needs of hepatectomy patient with pain as perceived by the patients.
3. To compare the needs of hepatectomy patient with pain and nurse responses as perceived by the patients.

Research questions

1. What are the needs of hepatectomy patient with pain as perceived by themselves?
2. What are the nurse responses to needs of hepatectomy patient with pain as perceived by the patients?
3. Is there any difference between the needs of hepatectomy patient with pain and nurse responses as perceived by the patients?

Scope of the study

The study was conducted in the First Affiliated Hospital and Cancer Center of Sun Yet-sen University of Medical Sciences in Guangzhou, Guangdong Province, China. The data collection was done during November, 1998 to February, 1999.

Definition of terms

Needs of hepatectomy patient with pain were physiological, safety, love and belonging desire of the patients generated during having hepatectomy pain during the first 48 hours after operation. It could be measured by the Needs of Hepatectomy Patient with Pain and Nurse Responses Questionnaire which developed by the researcher based on literature review.

Nurse responses to needs of hepatectomy patient with pain were nursing activities provided by nurses for hepatectomy patients to fulfill their needs in order to relief pain during the first 48 hours after operation. It could be measured by the Needs of Hepatectomy Patient with Pain and Nurse Responses Questionnaire which developed by the researcher based on literature review.

Hepatectomy pain

referred to the feeling of unpleasant physical sensation and emotional experience of the person associated with hepatectomy procedure, that reached its maximum within the first 48 hours after operation.

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