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Effect of nursing intervention on liver cancer patients undergoing interventional therapy.

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Abstract

Objective: This study aimed to explore the effect of nursing intervention on the pain nursing of liver cancer patients undergoing interventional therapy.

Methods: Eighty-two cases of liver cancer patients with interventional-therapy-related pain admitted in the oncology department of our hospital from March 2015 to March 2016 were recruited as research subjects. These patients were randomly divided into two groups by random number table. Forty-one patients in the control group were given conventional nursing, whereas 41 patients in the observation group were subjected to collaborative nursing. Pain remission rates and adverse reactions were compared between the two groups.

Results: The remission rates were 95.12% in the observation group and 75.61% in the control group, and the difference was statistically significant (P<0.05). The levels of the CD4 (27.45 ± 5.48), CD8 (35.97 ± 7.16), and NK cells (20.79 ± 2.49), as well as the CH4/CD8 ratio (0.69 ± 0.18), of the patients in the observation group were significantly higher than the values of (38.45 ± 5.98), (20.45 ± 6.41), (39.44 ± 3.49), and (1.31 ± 0.48), respectively, in the control group. Moreover, the differences were statistically significant (P<0.05). Meanwhile, the incidence rates of nausea, vomiting, constipation, and other adverse reactions in the observation group were lower than those of the control group (P<0.05).

Conclusion: The collaborative nursing model for liver cancer patients with interventional-therapy-related pain can significantly improve pain remission rates and reduce adverse reactions.

Keywords: Liver cancer interventional therapy, Pain, Collaborative nursing.

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Introduction

Pain is a common clinical symptom in cancer patients. Among the patients who underwent interventional therapy for liver cancer, 70%-80% experienced pain in varying degrees. Such pain may not only seriously affect the patient's mental health, but also bring great suffering and reduce the patient's life quality [1-3]. In this study, a collaborative nursing model was applied to liver cancer patients with interventional-therapy-related pain. The results were satisfactory, and the report is as follows.

Materials and Methods

General information

Eighty-two liver cancer patients with interventional-therapy-related pain who were admitted in the oncology department of our hospital from March 2015 to March 2016 were recruited as research subjects. All the patients were diagnosed with liver cancer, underwent interventional therapy, and then experienced pain in varying degrees. All the patients were informed of the study details. They did not take opioid drugs before admission, and those with concomitant pain caused by other diseases were excluded. The remaining patients were divided into the observation and control groups (41 per group) by random number table. A total of 25 males and 25 females (aged 34-78 years (54.1 ± 8.3 years)) comprised the observation group. By contrast, 24 males and 15 females (aged 35-77 years (53.8 ± 8.2 years)) constituted the control group. No significant difference in general patient information was noted between the two groups (P>0.05).

Method

The patients in the control group underwent the conventional pain care, including pain knowledge education, psychological comfort, basic nursing, and other pain care procedures.

Meanwhile, a medical care collaborative team was assembled; this team consisted of the attending physician and pain specialist nurses. After the patients were admitted to the hospital, the treatment and nursing care were administered by the collaborative nursing team.

The patients' family members were mobilized to participate jointly. The pain specialist nurses were in charge of strengthening the communication with the family members. They sought to understand the members' cognition of pain from interventional therapy for liver cancer to establish good nurse-patient relationships. The family members were instructed to participate in collaborative care, timely report the patients' pain status to the nurse, and pay close attention to the patient's pain. Furthermore, the family members were required to monitor the occurrence of new pain, determine whether the patient experiences side effects from the administered analgesic, and report to the attending physician. By contrast, the attending doctor was in charge of assessing the disease and prescribing the corresponding measures.

Health guidance: The diet guidance of the patients was strengthened. The diets of the terminal cancer patients were reduced in amount to decrease defecation accordingly. The charge nurse emphasized the importance of monitoring the patient's defecation status, formulated a healthy diet package for the patients, and conducted the corresponding abdominal massage. Laxative was given as needed to the constipated patients. The diet was light, and drugs conducive to digestion were prescribed to minimize gastrointestinal adverse reaction in the patients. The terminal cancer patients were asked to remain in bed for long periods. Some patients could not turn over because of fear of pain. In these cases, the nurse would teach the patients to perform the turning over method during the pain remission period.

Psychological guidance: The cancer patients often exhibited anxiety, irritability, depression, and other negative emotions due to long-term pain and side effects. In these instances, the nurses strengthened their communication with the patients, understood the patients' psychological statuses, and comforted the patients' suffering from psychological problems. The nurses also advised the family members to encourage the patients, support the patients emotionally, and visit the patients as frequently as possible. The nurses performed these measures to make the patients experience humanistic care.

Observation index

The pain remission degrees of the patients were observed after nursing care was completed. The pain remission scores were as follows: I for mild relief, II for moderate relief, III for significant relief, and IV for complete remission. The adverse reactions of the patients were statistically analysed.

Statistical analysis

Data were processed using the statistical software SPSS18.0. The pain remission rates and adverse reactions were expressed by ratios and analysed by the χ^2 test. $P<0.05$ was adopted to denote statistically significant difference.

Results

Pain remission rates

The pain remission rate in the observation group was 95.12%, which was significantly higher than that in the control group ($P<0.05$) (Table 1).

Table 1. *Pain remission rates in the two groups (n).*

Group	n	IV	III	II	I	Remission rate (%)
Observation group	41	21	11	7	2	95.12 (39/41)
Control group	41	13	10	8	10	75.61 (31/41)
χ^2		15.234				
P		0.000				

Immune functions before and after nursing

The levels of the CD4 (27.45 ± 5.48), CD8 (35.97 ± 7.16), and NK cells (20.79 ± 2.49), as well as the CH4/CD8 ratio (0.69 ± 0.18), of the patients in the observation group were significantly higher than the values of (38.45 ± 5.98), (20.45 ± 6.41), (39.44 ± 3.49), and (1.31 ± 0.48), respectively, in the control group. These differences were statistically significant ($P<0.05$, Table 2).

Table 2. *Immune functions before and after nursing.*

Group	CD4	CD8	CD4/CD8	NK
Control group	27.45 ± 5.48	35.97 ± 7.16	0.69 ± 0.18	20.79 ± 2.49
Observation group	38.45 ± 5.98	20.45 ± 6.41	1.31 ± 0.48	39.44 ± 3.49
t	11.507	13.703	10.262	36.912
P	<0.05	<0.05	<0.05	<0.05

Adverse reactions

A total of 10 cases of nausea and vomiting, 18 cases of constipation, and 1 case of somnolence were noted in the observation group. The incidence of adverse reactions in the observation group was significantly lower than that in the control group ($P<0.05$) (Table 3).

Table 3. *Adverse reactions of patients in the two groups (n).*

Group	n	Nausea and vomiting	Constipation	Somnolence	Cutaneous pruritus
Observation group	41	10 (24.39)	18 (43.90)	1 (2.44)	0

Control group	41	20 (48.78)	35 (85.37)	2 (4.88)	1 (2.44)
χ^2		13.483	38.281	0.842	2.470
P		0.000	0.000	0.358	0.116

Discussion

Cancer is a disease that seriously threatens human health. Liver cancer patients who undergo interventional therapy often experience pain. Clinical research shows that the annual number of new patients with cancers is 10,000,000 worldwide [4]. Among these patients, 35%-45% experience moderate-to-severe pain in the early-to-moderate stage. By contrast, 75% experience varying pain degrees in the progressive stage. Of this percentage, 25%-30% suffer from serious pain. Effective pain relief is the primary goal of cancer pain control in these patients [5]. This goal is a basic requirement for the nursing staff. To achieve this goal, the nursing staff must positively inquire on the patients' feelings. Meanwhile, the patient should also report their experiences to the nursing staff to provide a reference value for pain treatment.

The issue on narcotic drug addiction is a major obstacle for cancer pain control. To overcome this obstacle, the nursing staff must possess correct knowledge on narcotic drugs. The collaborative nursing model is a new nursing model proposed on the basis of the Orem self-care theory [6,7]. The positive role of the patients' family members should be fully utilized in nursing management. The nursing staff can accurately assess cancer pain and cooperate with the doctor to formulate an appropriate treatment plan. The accurate assessment of the pain degree is the most important aspect in controlling cancer pain. In the assessment process, the nursing staff plays an important role in the proper evaluation of pain [8]. While helping patients to take drugs in a timely manner, the nursing staff must also monitor for analgesic effects and adverse reactions. The guidelines for pain nursing intervention should be relayed to the patients. This action would help the patients develop correct medication habits. Moreover, the report of nursing staff can also provide to the doctor a basis for promptly adjusting the treatment plan [9]. Psychological nursing is a highly important intervention method during pain nursing intervention. Under this method, health education can be achieved for the patients and their family members, who would then acquire a correct understanding of the adverse reactions and tolerance to drugs [10]. Furthermore, psychological nursing can help relieve the mental stress and increase the confidence of the patients and family members in overcoming the disease. In this study, a collaborative nursing model was applied to patients in the observation group. The pain remission rate in the observation group was 95.12%, which was significantly higher than the 75.61% in the control group. Moreover, the incidence rates of nausea and vomiting, constipation, and other adverse reactions in the observation group were significantly lower than those of the control group ($P<0.05$). This finding is consistent with that reported previously.

Conclusion

In summary, the liver cancer patients with interventional-therapy-related pain in this study showed significantly improved pain remission rates and reduced incidence rates of nausea and vomiting, as well as constipation, under collaborative nursing management. Hence, the collaborative nursing model merits clinical promotion.

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