



The Effect of Psychological Care on the Prevention of Needle Phobia During Venous Blood Sampling in Healthy Subjects

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Abstract

Objective: To analyze the effect of psychological nursing on the prevention of needle syncope after venous blood collection in healthy people. **Methods:** 110 healthy people who underwent venous blood collection in our center from January 2019 to June 2020 were divided into two groups according to the digital grouping method. 55 cases in the control group were treated with routine nursing, and 55 cases in the observation group were treated with routine nursing + psychological nursing measures. The incidence of needle syncope and nursing satisfaction were compared between the two groups. **Results:** the incidence of needle syncope in the observation group was lower than that in the control group, and the nursing satisfaction was higher than that in the control group ($P < 0.05$). **Conclusion:** according to the situation of needle fainting in venous blood collection of healthy physical examination, psychological nursing intervention can help to alleviate the tension of patients before blood collection, reduce the incidence of needle fainting and improve nursing satisfaction, which is worthy of clinical application.

Keywords

Psychological Nursing; Effect; Venous Blood Collection; Needle Fainting

Needle phobia is a common clinical phenomenon, which is caused by transient cerebral ischemia and hypoxia due to various reasons. The cause of needle phobia may be related to the patient's own emotions. When the patient is receiving blood sampling, the patient is too nervous, and the pain caused by the needle prick intensifies the emotional response, resulting in needle phobia [1]. Or it may be related to the patient's own physical constitution. The patient's weak constitution or hypoglycemia caused by not eating before blood sampling will also increase the incidence of needle phobia. At the same time, improper treatment of the patient or the doctor's operation may also increase the incidence of needle phobia [2]. When needle phobia occurs, the patient will feel dizzy, pale, nauseous, cold limbs, sweating, and even shock due to the extremely rapid decrease in cardiac output in a short period of time [3]. In clinical practice, needle phobia is a common phenomenon. Therefore, medical staff should pay more attention to needle phobia and formulate positive and effective measures to reduce the incidence of needle phobia [4]. In this study, 110 healthy subjects who underwent venous blood sampling in our center from January 2019 to June 2020 were selected as research subjects. Conventional nursing + psychological nursing measures were adopted to explore the preventive effect of psychological nursing on needle phobia during venous blood sampling in healthy subjects. The specific report is as follows.

1. Materials and methods

1.1 General information

A total of 110 healthy subjects who underwent venous blood sampling in our center from January 2019 to June 2020

were selected and divided into two groups according to the digital grouping method. The control group had 55 cases: 23 male subjects and 32 female subjects; aged 16-40 years old, with an average age of (29.96 ± 5.43) years old; 16 cases had a history of needle phobia, and 39 cases had first-time needle phobia. The observation group had 55 cases: 27 male subjects and 28 female subjects; aged 16-41 years old, with an average age of (28.72 ± 5.33) years old; 18 cases had a history of needle phobia, and 37 cases had first-time needle phobia. The basic information of the two groups of patients was compared, $P > 0.05$, and there was no statistical significance. Inclusion criteria: patients and their families signed a consent statement. Exclusion criteria: history of severe mental illness; communication disorders; voluntary withdrawal.

1.2 Methods

The patients in the control group were given routine nursing methods, and standardized measures were taken in time after the patients had needle phobia, and recovery guidance was provided. The patients in the observation group were given psychological nursing measures on the basis of routine nursing. The nursing methods were as follows: Nurses should do a good job of psychological counseling before blood collection, because some patients may have excessive tension before blood collection or have past puncture failure experience, and have a fear of puncture. Therefore, before blood collection, nurses need to do a good job of asking questions, and the language is soft and warm, and the attitude is amiable, so as to reduce the tension of patients. If the nurses have a stiff expression, a serious face, speak too loudly, and have a cold attitude, it will increase the negative emotions or tension of the examinees, which is not conducive to establishing a nurse-patient relationship. Nurses should ask the examinees whether they have a history of needle phobia, whether they have symptoms of hypotension, etc., let the examinees relax and not be too nervous, explain the basic knowledge of blood drawing and the causes of needle phobia to the examinees, and tell the examinees that needle phobia is very common in clinical practice, and they don't need to be afraid even if needle phobia occurs, etc., eliminate the psychological barriers of the examinees, encourage the examinees to be brave, and build confidence for the examinees, which can greatly relieve the negative emotions of the examinees. If the examinee has a history of needle phobia before blood collection, the nursing staff should ask the examinee in detail about the reasons for needle phobia in the past, and formulate effective corresponding measures through analysis. During blood collection, psychological intervention should be given, and the examinee should be communicated with to observe whether the examinee is nervous. The examinee should be comforted in a gentle tone to relax the examinee, and the examinee's nervousness should be reduced through comforting words such as "blood drawing is quick and it doesn't hurt at all". During the blood draw, the nursing staff should maintain communication with the examinee, say more encouraging words, and divert the examinee's attention through chatting. If the examinee asks some questions related to blood drawing or needle sickness during the communication, the nursing staff should actively answer them, and let the examinee's eyes avoid contact with the blood drawing needle as much as possible. The examinee can be guided to turn his head in the opposite direction. For those who are psychologically resistant, the nursing staff should patiently comfort them and tell the examinee not to move around during blood drawing. If the examinee experiences needle sickness, the blood draw should be stopped immediately and the examinee should be observed for symptoms of needle sickness. If the examinee's symptoms are mild, the examinee can be assisted to rest on the sofa, and softly asked if he has any other discomfort, and a cup of warm water should be prepared for the examinee. If the examinee has no history of diabetes, a cup of sugar water can also be prepared for the examinee. If the examinee is seriously sick of needles, reasonable measures should be taken in time to guide the examinee to lie flat, evacuate the crowd, ensure good ventilation, and create good recovery conditions for the examinee. After the examinee's symptoms of needle sickness improve, the examinee should be comforted and told that needle sickness is normal and will not affect the examinee's health, etc., to dispel the examinee's doubts. For examinees with a history of needle sickness, protective measures should be taken during blood drawing to avoid injury in the event of fainting, and the examinee should be asked to lie on the blood drawing table or lie in bed.

1.3 Observation indicators

The needle fright rate of the two groups was compared and divided into severe needle fright, needle fright and no needle fright. The needle fright rate = $(\text{severe needle fright} + \text{needle fright}) \times 100\%$.

The nursing satisfaction between the two groups was compared and analyzed using the nursing satisfaction questionnaire developed by our hospital, which was divided into very satisfied, satisfied and dissatisfied. The total

satisfaction rate = (very satisfied + satisfied) \times 100%. The survey was conducted after the physical examination. The questionnaire included aspects such as the nursing staff's attitude, operation, and whether the post-treatment of needle sickness was appropriate, with a total of 100 points. A score below 60 was considered dissatisfied, 60-80 was considered satisfied, and a score above 80 was considered very satisfied.

1.4 Statistical methods

This study used statistical software (SPSS 20.0) for data analysis, and the measurement data (t) and count data (χ^2) were expressed as ($\bar{x} \pm s$) and (n, %), respectively. If $P < 0.05$, it was statistically significant.

2. Results

2.1 Comparison of needle phobia rates between the two groups

In the observation group, 4 cases of severe needle phobia occurred, with an incidence of 7.27%, 39 cases of needle phobia occurred, with an incidence of 70.90%, and 12 cases of non-needle phobia occurred, with an incidence of 21.82%. In the control group, 9 cases of severe needle phobia occurred, with an incidence of 16.36%, 43 cases of needle phobia occurred, with an incidence of 78.82%, and 3 cases of non-needle phobia occurred, with an incidence of 5.45%. The needle phobia rate in the observation group was 78.82%, which was significantly lower than the needle phobia rate of 94.54 in the control group, $\chi^2 = 6.252$, $P = 0.012$. $P < 0.05$, with statistical significance.

2.2 Comparison of nursing satisfaction between the two groups of examinees

In the observation group, 32 subjects were very satisfied, with a very satisfactory rate of 58.82%. There were 11 subjects who were satisfied, with a satisfactory rate of 20.00%. There were 2 subjects who were dissatisfied, with a dissatisfied rate of 3.63%. There were 53 subjects who were generally satisfied, with a total satisfaction rate of 96.36%. In the control group, 12 subjects were very satisfied, with a very satisfactory rate of 21.82%. There were 30 subjects who were satisfied, with a satisfactory rate of 54.54%. There were 13 subjects who were dissatisfied, with a dissatisfied rate of 23.63%. There were 42 subjects who were generally satisfied, with a total satisfaction rate of 76.36%, $\chi^2 = 9.340$, $P = 0.002$. The total satisfaction rate in the observation group was significantly higher than that in the control group. $P < 0.05$, which was statistically significant.

3. Discussion

During acupuncture, if the patient suddenly experiences palpitations, dizziness, vertigo or even fainting, it is considered needle phobia. Generally speaking, if the patient is physically weak, tired, in a state of high mental tension in daily life, or improper operation during acupuncture, causing increased pain, bleeding and other factors, needle phobia may occur. Its pathogenesis is a vaso-inhibitory syncope, which is a reflex syncope [5, 6]. It is a vagus nerve reflex after the human body is stimulated, causing the vascular bed (especially the surrounding muscles) to expand, peripheral vascular resistance to decrease, and the amount of blood returning to the heart to decrease, thereby reducing cardiac output and blood pressure, leading to a temporary and widespread decrease in cerebral blood flow, and causing syncope [7-9]. In response to needle phobia, when the patient experiences needle phobia, the needle should be removed immediately, acupuncture should be stopped, and the patient should be allowed to lie flat with the head lowered as much as possible, and gradually recover [10, 11]. During venous blood sampling, some patients may show nervousness and anxiety before blood sampling, and even resist and fear needle pricking. When patients are extremely nervous, they are prone to needle phobia, which is not conducive to smooth blood sampling. Some patients may also experience needle phobia due to pain [12-14]. Therefore, psychological nursing intervention should be given to patients before venous blood sampling to help them eliminate nervousness and reduce the occurrence of needle phobia.

In this study, psychological nursing intervention was carried out for 110 healthy people who fainted from venous blood collection during physical examination. The results showed that the incidence of needle fainting in the observation group was significantly lower than that of the control group, and the nursing satisfaction was significantly higher than that of the control group, $P < 0.05$. There is statistical significance. It shows that the implementation of psychological nursing intervention for patients who faint from needle fainting during venous blood collection and physical examination can help reduce the incidence of needle fainting and improve nursing satisfaction. During the implementation of this psychological nursing measure, the nursing staff used effective measures such as health

education, attention transfer, comfort before blood collection, and encouragement to alleviate the mental tension of the patients undergoing physical examination, and the implementation effect was remarkable.

In summary, taking psychological nursing measures to intervene in the situation of healthy patients fainting during venous blood collection can help relieve patients' nervousness before blood collection, reduce the incidence of needle fainting, and improve nursing satisfaction, which is worthy of clinical promotion and application.

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