The Nursing Method and Effect of Sedation and Analgesia in Mechanically Ventilated Patients Were Analyzed

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Abstract. With the continuous improvement of medical level, people pay more and more attention to the nursing quality of mechanical ventilated patients, and the rescue success rate of intensive care unit patients is getting higher and higher, so the demand for anesthesia and analgesia care of mechanical ventilated patients is becoming higher and higher. Anesthesia and analgesia for mechanically ventilated patients mainly includes endotracheal intubation, endotracheal intubation, tracheotomy, catheter care, etc. Among them, mechanical ventilation is a common treatment method of patients in intensive care units. Due to the potential danger of endotracheal intubation, the aspiration will be life-threatening. Tracheal intubation surgery can cause serious consequences such as lung infection and even lung rupture, so the correct use of mechanical ventilation technology can not only reduce the patient mortality rate, but also reduce the complications caused by the improper use of the ventilator.

Keywords: Intensive Care Unit; Mechanical Ventilation; Sedation and Analgesia; Nursing Method; Effect.

1. Introduction

The use of mechanical ventilation can reduce the patient's case fatality rate, but in the process of using the ventilator in patients, there are many complications and nursing problems, including respiratory failure is the most common complication in the intensive care unit, because it affects the patient's quality of life and health status, so the management and application of the ventilator is an important part of the nursing work. Mechanical ventilation is a special form of ventilation that reduces airway resistance, increases pulmonary ventilation, improves patient oxygenation, and the severity of respiratory failure[1]. Most of the ICU patients will develop varying degrees of respiratory failure. Hyperventilation or hyper-oxemia and respiratory depression are occur during the process of mechanical ventilation.mechanically ventilated patients in the intensive care unit are often accompanied by various complications and care problems such as respiratory acidosis, hypoxemia and lung infection. This paper discusses the nursing methods and effect of mechanical ventilation patients.

2. Analysis of Nursing Methods of Sedative and Analgesia for Mechanically Ventilated Patients in Intensive Care Unit

Nursing staff should pay attention to the following points in the process of sedation and analgesic care for patients mechanically ventilated in the ICU:

1. Maintain good ventilation

In the treatment of mechanical ventilation patients, it is necessary to maintain a good ventilation state to help the patient leave the ventilator as soon as possible. At the same time, the patient cannot enter the airway of the patient during the ventilator use, otherwise it is easy to cause respiratory failure. In addition, during the whole process of treatment, the patient should avoid inhaling the secretions containing bacteria. If the patient is not treated in time after inhalation, it will cause the body infection[2]. Therefore, it should be operated in strict accordance with the ventilator use method, and replace the wipes in time according to the use method. Under normal circumstances, regularly check whether the ventilator volume is normal and the air is unobstructed. If the wind volume is found to be too large or too hourly, it should be adjusted and adjusted in time. At the same time, we should

ensure that the ventilator has good ventilation and moderate exhaust, of course, the general air purifier is better, better fresh air system, the wind speed is higher.

2. Use the correct body position

ICU medical staff should be corresponding nursing according to the patient's different condition, such as in the process of mechanical ventilation may appear double lung inflation, but need to put the patient in the right position to relieve the compression of the airway and inflammation, so that patients in breathing normally and not affected by other diseases, but also can avoid inhalation pneumonia and other diseases. Generally, it is necessary to place the patient above the upper abdomen when the patient lies in bilateral, which can increase the food discharge in the gastrointestinal tract and avoid the blockage of stomach content logistics into the respiratory tract. It can also be placed on the inside of the right knee to improve the efficiency of venous return, so as to alleviate the problems such as cardiac insufficiency and lung diseases. In addition, in the implementation of endotracheal intubation, patients should pay attention to keep the head back and slowly insert the soft and hard catheter into the airway to avoid choking conditions[3]. During the use process, patients should be guided in strict accordance with the relevant regulations. If there is no standard operation during the process, it may lead to poor breathing or carbon dioxide retention, resulting in atelectasis. Therefore, when the patient has the above problems should immediately correct the posture and timely deal with the condition.

3. Keep warm

ICU caregivers should pay close attention to the patient's systemic condition, including body temperature, respiratory and mental state, to avoid symptoms caused by infection due to cold. Especially in winter, the climate gradually becomes cold and the temperature gradually decreases, and the cold air can easily lead to the spread of some diseases. Therefore, plans should be made for thermal measures, such as incorporating them into their daily work, or recording their body temperature, breathing conditions, and mental state every 1h to take appropriate measures in time. In addition, ensure appropriate temperature, fresh air, suitable for exercise, fresh air, etc. For mechanically ventilated patients, due to their airway stenosis, large ventilation resistance, and with obstructive pulmonary disease. Therefore, special attention should be taken when using ventilators, especially when the bare parts of patients are wet or the body temperature is low, it is more necessary to keep warm; and if the severe respiratory failure, cerebral hypoxia and other complications should be strengthened.

4. Pay attention to monitoring the heart rate changes

The heart rate of mechanically ventilated patients is generally 120 to 140 beats / minute, and it is up to 150 beats / minute. Among them, the heartbeat per minute is 60 times or so, which is the performance of heart failure. Therefore, it is necessary to timely monitor the patient's heart rate changes in the care of mechanical ventilation. Firstly, monitor blood pressure changes regularly to ensure that it is in a stable state; secondly, monitor the patient's respiratory rate and pay attention to the contraction of the patient; finally, combine blood pressure and heart rate with systemic blood pressure. In addition, attention should be paid to any misoperation on the monitoring instrument; and also make CPR records, rescue records and treatment records to assess chest tightness, shortness of breath, dyspnea, tachycardia, consciousness disturbance and coma status. It is necessary to monitor the whole process, deal with and find problems and solve them.

5. Closely observe the hemodynamic changes of the patients

The use of mechanical ventilation will have a certain impact on the patient's heart function, so the ICU medical staff should always pay attention to the hemodynamic changes of the patients. In general, when heart is insufficiency, oxygen saturation decreases. At this time, the medical staff are required to closely observe the blood flow condition. If the blood oxygen saturation is reduced, it is necessary to adjust the ventilator parameters in time and give the corresponding treatment. If respiratory failure exceeds 5min with no signs of improvement or other abnormal symptoms, endotracheal intubation must be performed. If the patient has shock and other conditions, the corresponding treatment measures should be given immediately.

3. Second, Timely Find out the Problems and Solve the Various Nursing Problems Brought by Them

It is very important to find out various nursing problems in time and take effective treatment measures for patients in time. With the continuous development and progress of science and technology, the chance of various complications in mechanically ventilated patients is greatly reduced. After the patient has the corresponding symptoms, the nursing staff should pay attention to observe whether the patient's condition is aggravated, breathing disorder, body temperature change, etc. Once the above situation should be immediately subjected to the corresponding treatment, and should also pay attention to the timely adjustment of drugs and other measures in the subsequent treatment process[4]. In the process of endotracheal intubation for patients, we should not only closely observe the patient, but also do more communication with other departments. Usually, mechanical ventilated patients still need to maintain for about 6~8h after sedation to ensure the normal recovery of pulmonary function. For patients with endotracheal intubation, caregivers should check their vital signs regularly after the use of sedative drugs to timely detect and solve the complications, such as airway blockage and inflammation around the ventilator catheter. For patients with tracheostomy, attention should be paid to maintaining their physical health and airway patency.

1. Establish a good communication

During mechanically ventilated patient anesthesia, medical staff need to communicate effectively with the patient to establish a good nurse-patient relationship for them. First of all, as far as the hospital departments themselves are concerned, they should strengthen the care of sedative patients and establish a good relationship for them. For example, the nurse-patient communication platform can be added in the hospital, so as to form a cooperative working relationship between various departments. Secondly, some representative events can also be selected to further explore the problems existing in the anesthesia process together with the caregivers. In dealing with problems and events, we should base the specific events, analyze the causes of the problems and seek solutions. Finally, some simulation techniques can also be used to complete the relevant operation process and conduct the corresponding simulation operations to improve the mastery of the relevant personnel to this technology.

2. Monitor the patients' vital signs regularly

For patients who use sedative drugs, they should not only pay attention to their vital signs, but also pay close attention to the changes in their condition. Patients because they are in a long-term extremely calm state, often can not accurately grasp their own pulse, breathing, blood pressure and other vital signs. The mechanical ventilation patient usually lasts about half an hour after the start of the sedative drugs; it will gradually decrease the action time, and it will cause some harm to the patients and their families[5]. For this situation once encountered often need to implement the corresponding surgical treatment. If the patient still has no obvious signs of resuscitation after surgical treatment, corresponding measures should be taken to ensure the patient's vital signs.

3. Reasonable choice of sedative drugs

Due to the different physical status of patients and their own diseases, there are also some differences in the anesthesia regimen. In the process of clinical practice, clinicians have their own preferences when choosing different sedative drugs. For example, when opioids are used, propofol can be selected. However, some studies have found that different anesthesia methods also have a certain impact on the effect of sedation, so the sedative drugs should be reasonably selected according to the specific situation in the clinical application process.

4. Adjust the drug dose or replace the sedative drugs in time

Since the patient is mechanically ventilated, all the organs and tissues in the body are constantly operating, so they must be used strictly in strict accordance with the drug use instructions. In addition, with the passage of time and drug dosage changes, different drugs or different doses may produce adverse reactions, so the use of sedative drugs must cause enough attention. Once the poor quality drugs or large dose of sedative drugs are selected, they must be adjusted in time according to the specific effect and dosage of the selected drugs. For the drugs with sedative and analgesic effect but

also have certain side effects, they should be timely replaced with other sedative drugs with good quality and small drug dose[6]. These drugs are generally easily absorbed by patients or cause poisoning problems after giving small doses but good therapeutic effects. In addition, some sedative drugs with adverse cardiovascular effects but relatively small sedative effects should be valued by nurses and replaced with other good quality and effective sedative drugs in the first time.

The use of mechanical ventilation has a very important role in respiratory failure and lung infection in critically ill patients. Mechanical ventilation patients will develop dyspnea, hyperxemia and atelectasis. Therefore, respiratory control in mechanically ventilated patients is very important. Due to the complex nature of the management and care of ICU mechanical ventilation patients and various factors have caused a certain degree of pressure. So we want to do a good job of sedation and analgesia work. The most important thing to do good sedation and analgesia is to do good observation on the comfort of patients. Only the patient comfort can be beneficial to the use of ventilator.

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