

Nursing Experience of One-Piece Ostomy Bag Closure Combined with Negative Pressure Drainage in Pharyngeal Fistula Drainage

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Abstract: Objective To summarize the effect of one-piece ostomy bag closure combined with negative pressure drainage technology in the drainage of pharyngeal fistula patients, reflect on the shortcomings of nursing, in order to accumulate experience for future clinical work. Nursing points: Early assessment and monitoring of pharyngeal fistula, the application of ostomy bag combined with closed negative pressure drainage technology for the selection of ostomy bag, maintenance of effective continuous negative pressure drainage is particularly important in nursing, at the same time, during the nursing process to observe the skin infection at the incision, incision healing time, dressing change times and comfort level of patients, reflect on the shortcomings in nursing. It is expected to achieve the expected therapeutic effect and shorten the length of hospitalization after active treatment and careful nursing.

Keywords: Ostomy Bag; Negative Pressure Closed Drainage; Pharyngeal Fistula; Nursing

1. Clinical Data

The patient is a 68-year-old male. She was admitted to hospital because of "sore throat and swallowing pain for 3 months, and throat mass was found for 17 days". In April 2022, the patient developed pharyngeal pain and dysphagia 3 months after reduction surgery for right shoulder fracture. Laryngoscopy revealed new organisms in the right arytenoid area, and mucosal lesions in the pharyngeal piriform fossa and arytenoid tuberculum were subsequently observed during gastroscopy, and squamous cell carcinoma was pathologically diagnosed. Radical resection of hypopharyngeal carcinoma + tracheotomy under general anesthesia in May 2022. On the 7th day after surgery, the patient's neck incision was split and pharyngeal leakage occurred. The doctor changed the dressing with traditional dressing methods. After 8 days, the patient's right neck incision was split until the pharyngeal orifice fistula was enlarged to 10cm, and the pharyngeal fistula seepage was large. 3 days after the formation of large pharyngeal fistula, the wound ostomy specialist nursing team was invited for consultation, and combined with the experience, the patients began to apply the integrated ostomy bag closure and negative pressure drainage for pharyngeal fistula drainage.

2. Nursing process

When patients developed large pharyngeal leakage, doctors gave sterile gauze cover and pressure bandage, but usually after changing 3-4 times a day, about 90% of the pharyngeal fistula gauze was soaked by exudate, and there were still more exudate seepage to the neck and chest of patients, contaminating gowns and bed units, causing strong discomfort for patients. To prevent the exudate from continuing to seep and irritate the surrounding skin, try using a one-piece ostomy bag to collect the drainage tube exudate. Nursing staff prepared items: such as 75% alcohol, physiological saline, cotton balls, sterile scissors, one-piece ostomy bag, dressing change bag, drainage bag, negative pressure device, etc. The specific operations are as follows: (1) Use a sterile cotton ball dipped in normal saline to wipe the exudate around the pharyngeal fistula, remove the obvious necrotic tissue and foreign body several times, fully stop the bleeding, and wipe the surrounding skin. (2) Materials were selected according to the size of the wound. The size of the wound in this patient was larger than the diameter of the

ostomy bag bottom plate. The edge foam or hydrocolloidal dressing was cut according to the shape of the wound and pasted around the wound. (3) Cut the middle hole in the ostomy bag chassis, and the aperture distance is trimmed according to the size of the fistula, and in a radial shape. Cut the edge of the ostomy bag chassis every 3cm or so, tear off the backing, flatly paste it on the edge foam dressing or hydrocolloidal dressing and the skin around the wound, and press it for 2 ~ 4min. Put the drainage tube into the open end of the stomy bag and tie the open end tightly with several strips of 3M elastic soft cotton tape to form a closed space so as not to affect the drainage. (4) Prepare a drainage tube according to the size of the wound, the leakage situation and shape. Place one end of the drainage tube close to the bottom edge of the ostomy bag, and draw out the central negative pressure from the open end of the ostomy bag. The open end of the ostomy bag is folded and wrapped around the drainage tube along the longitudinal axis, and the junction is tightened with 3M elastic soft cotton wide tape to prevent leakage. ⑤ Finally, cut several pieces of 3M elastic flexible cotton wide tape of corresponding size and paste them around the bottom plate of the ostomy bag and the foam of the bridge to prevent curling caused by friction and shear force and the failure of negative pressure caused by air leakage. ⑥ Adjust negative pressure. Adjust the appropriate negative pressure value (0.02 ~ 0.04kPa) according to the size of the wound and the amount of seepage to maintain the negative pressure state of the ostomy bag and keep the drainage smooth. In the daily management of the ostomy bag, the chassis of the ostomy bag should be replaced immediately when there is leakage. If there is no leakage but the incision is infected, the replacement frequency is 1 ~ 2d/ time. In other cases, the general replacement frequency is 3 ~ 5d/ time. One week after using this dressing change method, it was observed that the pharyngeal orifice fistula of the patient was significantly reduced, the seepage at the orifice fistula was significantly reduced, the skin around the orifice fistula was dry without seepage adhesion, and the patient's hospital dressing unit was contaminated.

3. Nursing experience

Pharyngeal fistula is a common complication after total laryngectomy for laryngeal cancer and hypopharyngeal cancer. Treatment of pharyngeal fistula is difficult because of its particularity. Positive results have been obtained in promoting the early recovery of pharyngeal fistula patients with closed negative pressure drainage. Negative pressure wound treatment is one of the wound treatment methods, including closed negative pressure drainage and negative pressure assisted wound closure two key techniques. The treatment helps improve local blood flow, reduce tissue edema, reduce bacterial count, and promote granulation tissue growth. The use of closed negative pressure drainage of orifice fistula can reduce the pollution of saliva and food to the fistula cavity and avoid the direct action of sputum suction tube on the fistula cavity, so as to keep the drainage of orifice fistula smooth is the focus of care for pharyngeal fistula patients. Nursing attention points of pharyngeal fistula closed negative pressure drainage: (1) Maintain continuous and effective negative pressure, pay attention to observe whether the application at the fistula is loose, whether the negative pressure device is tight, whether there is air leakage, and whether the drainage tube is compressed or folded, so as to block the negative pressure source. Emphasize the importance of maintaining continuous negative pressure suction and ask patients to move around the bed as much as possible. Properly fix the negative pressure suction pipe, and inform the patient to avoid pulling when changing the position, so as to prevent the pipe from falling off or leaking. Observe whether the negative pressure of the negative pressure source is within the prescribed range. The negative pressure in this case is adjusted at 0.02 ~ 0.04MPa. (2) Pay attention to observe whether the negative pressure drainage tube is fixed and smooth, and whether there is liquid drainage. If the negative pressure is good, and there is no liquid drainage, the position of the suction tube can be adjusted appropriately. If there is no negative pressure, it may be a lax seal and air leakage. The common leakage part is the liquid leakage on the edge of the application and the skin wrinkle; Disordered lamination leads to a "gap" between the film and film; The open end seal of the ostomy bag is not in place; The ostomy bag is broken. The leak can be resealed with a transparent compress and redressed if necessary. In addition, when the negative pressure source is abnormal, such as insufficient negative pressure caused by the damage of the suction device, air leakage at the junction of the drainage channel, power failure and short circuit of the power supply, it should be dealt with according to specific reasons^[2].

Effects of dressing bypass technology In this case, the pharyngeal orifice fistula of the patient was irregular in shape and the maximum length of the leakage orifice was more than 10cm, which was a refractory wound in the ear, nose and throat specialty. Due to the lack of clinical materials, there was no wound collection bag of appropriate size. The foam or hydrocolloidal dressing is used to absorb the seepage and paste with edges to narrow the space above the wound surface, create conditions conducive to the effective paste of the stomachs bottom plate, and provide a new choice for a large area of difficult wounds.

Function of the ostomy bag The patient's wound seepage volume exceeds 100mL within 24h. Due to continuous seepage, it cannot be completely absorbed by using conventional dressing. In order to prevent sustained damage to the patient's skin caused by the seepage, we must change the dressing every day, sometimes even several times a day. The skin around the wound will be in a state of infiltration for a long time, which is easy to cause skin-related inflammation and infection. Some patients will sometimes have pain, and even the wound suppuration and odor. The application of one-piece ostomy bag can reduce the frequency of dressing replacement, more effectively avoid the wound seepage infiltrating the surrounding skin, and keep the skin around the wound clean and dry, which will greatly reduce the impact on the patient's bed activities. In addition, in clinical work, the color, character and quantity of wound drainage fluid are all key parameters, which are related to the accurate determination of follow-up treatment plan for patients. The traditional nursing model requires medical staff to judge the amount of fluid seepage of patients' wounds only by observing the wetting condition of dressings and the number of dressing changes, which cannot provide accurate clinical data for the follow-up treatment of patients. One-piece ostomy bag is transparent, easy to observe, and can accurately measure and record the amount of drainage fluid, providing more intuitive and accurate data for medical staff, so as to ensure better treatment effect for patients.

Reducing nursing workload For patients with continuous leakage of pharyngeal opening fistula, medical staff need to replace dressing for patients more than three times a day. The improved application of one-piece ostomy bag not only greatly reduces the workload of medical staff, but also can effectively collect seepage and save medical resources.

4. Summary

According to the experience, dressing the ostomy bag according to the patient's wound condition and using dressing bypass dressing change technology can better adapt to the specificity of pharyngeal fistula wound, reduce the workload of medical care, improve the comfort level of patients, save the cost of consumables and shorten the healing time of pharyngeal fistula, so it is an effective treatment method for pharyngeal fistula.

References

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