

The Causes and Nursing Care of Peripheral Vascular Complications after Femoral Artery Intervention

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Keywords: Femoral Artery Intervention; Peripheral Vascular Complications; Causes; Nursing

Abstract: Objective to analyze the causes and effective nursing care of peripheral vascular complications after femoral artery intervention. **Methods:** the clinical data of 80 patients who received arterial intervention from January 2019 to October 2019 were analyzed retrospectively. The incidence of peripheral vascular complications was counted, and the causes and nursing care were summarized. **Results:** 6 patients of the 80 patients had peripheral vascular complications, and the incidence was 7.5%. At the same time, 97.5% patients were satisfied with nursing service.

At present, femoral artery intervention is a common clinical operation method, with the advantages of small trauma and high success rate. However, there are many complications of peripheral vascular complications after the operation, which not only increases the pain of patients, but also extends the recovery time of the disease^[1]. In view of this, this study selected specific objects, focused on the analysis of the causes of peripheral vascular complications after femoral artery intervention, and implemented targeted nursing interventions, which are summarized as follows:

1. Data and methods

1.1 General information

From January 2019 to October 2019, 80 patients underwent arterial intervention, of which the male to female ratio was 34:46, with an average age of (56.32 ± 9.36) years and an average operation time of (66.32 ± 5.36) minutes. They agree to participate in the study, and exclude those with serious organ disease and mental disease.

1.2 Method

Statistical analysis of postoperative complications of peripheral vascular complications in patients was carried out, the causes of induction were summed up and analyzed, and nursing interventions were formulated effectively.

2. Results

2.1 Analysis of complications

According to statistics, in 80 patients, there were 2 cases of inguinal subcutaneous hematoma, 1 case of pseudoaneurysm, 1 case of femoral arteriovenous fistula, 2 cases of retroperitoneal hematoma. The incidence of postoperative peripheral vascular complications was 7.5%.

2.2 Analysis of satisfaction

According to statistics, 38 of the 80 patients were relatively satisfied, 40 were generally satisfied, 2 were not satisfied, and the nursing satisfaction was 97.5%.

3. Discussion

Under the new economic normal, medical technology is increasingly mature, and interventional surgery is commonly used in the process of disease diagnosis and treatment. Related research points

out that patients undergoing femoral artery interventional surgery have a high risk of peripheral vascular complications after surgery, which not only affects the quality of life of patients, but also is not conducive to rapid recovery of the disease. Therefore, it is important to analyze the causes of peripheral vascular complications in clinical practice, and propose effective nursing measures based on the specific circumstances of the patient to induce the prevention of complications and ensure the safety of patients' lives.

3.1 Cause analysis of peripheral vascular complications after femoral artery intervention

3.1.1 Inguinal subcutaneous hematoma

In this study, two patients had complications of inguinal subcutaneous hematoma. Subcutaneous hematoma is a common complication of peripheral blood vessels. The puncture site is a high-incidence site. The blood of patients with a thin constitution can easily leak out of the subcutaneous tissue; the blood of obese people can be easily punctured and bleeding, especially after 3 to 4 hours^[2]. At the same time, the subcutaneous tissue of older patients is relatively loose, the bleeding pressure is high, the subcutaneous tissue is easily torn, and it spreads along the external genitalia, the inner thigh and the abdomen, and gradually forms a subcutaneous hematoma. The appearance of inguinal subcutaneous hematomas may be caused by surgery or nursing, or it may be a potential risk factor for patients. The former may be improper puncture sites, multiple surgeries in a short period of time, prolonged operation, excessive anticoagulant effects, and insufficient compression hemostasis^[3]; the latter may be due to the age of patients, vascular complications, difficulty in deep inguinal bandaging, high blood pressure, poor coagulation function, and less limb activity. At the same time, vomiting and a strong cough can also cause an increase in abdominal pressure, leading to subcutaneous hematomas.

3.1.2 Pseudoaneurysms

Among the subjects in this study, one patient was diagnosed with a pseudoaneurysm by color Doppler. The reasons were premature postoperative activities and incomplete compression and hemostasis. The patient felt pain in the puncture site, there was a local subcutaneous mass, and there was a sense of fluctuation when touched. The stethoscope could hear noise in the blood vessels. After detection, the patients were pressed for 1 h, then wrapped with bandages, pressed with salt bags for 8 h, and braked for 1-2 days, and the result of B-ultrasound showed that the pseudoaneurysm disappeared. Pseudoaneurysms mostly occur in the femoral artery. The causes are: premature postoperative limb movements that lead to slow arterial repair; shallow puncture sites, improper hemostasis, and abuse of anticoagulants. 1-2 days after the operation, a pseudoaneurysm can be detected by ultrasound, which is also the best time for treatment. In clinical care, the patient's wound adjuvant and dorsal foot artery pulsation should be closely observed, and life should be guided scientifically to prevent poor braking effects due to poor bowel movements or excessive fatigue.

3.1.3 Femoral arteriovenous fistula

In this study, 1 patient developed femoral arteriovenous fistula. Because of unscientific puncture, the artery and vein were penetrated. In addition, the distal limb movement and blood circulation were not smooth 24 hours after the operation. The blood vessels at the puncture site had continuous tremor and murmur. The ultrasound results showed that the femoral arteriovenous fistula, which was compressed by sandbag for 6 hours and pressure bandaging for 1 day, together with the right lower limb brake for 2 days, had no murmur after 7 days. The color ultrasound results showed that the arteriovenous fistula disappeared. The main causes of femoral arteriovenous fistula are as follows: (1) It is improper to determine the anatomic position of blood vessels during the operation; (2) The needle angle is improper when puncture, and puncture the arteriovenous^[4]; (3) The operator operates improperly after the operation, repeatedly puncture, and does not carry out compression hemostasis.

3.1.4 Retroperitoneal hematoma

Retroperitoneal hematoma is a serious complication of peripheral blood vessels. When patients have obvious symptoms (such as hypotension), there may be serious bleeding. If it is not diagnosed and treated in time, it will seriously threaten the life of patients. In this study, 2 patients developed retroperitoneal hematoma after operation. Because of the serious consequences of this complication, caregivers should be highly vigilant, understand clinical characteristics, observe the condition carefully, and dynamically detect changes in blood pressure, heart rate, and abdominal pain of patients, and make early diagnosis and treatment.

3.2 Clinical nursing measures

In order to effectively prevent the occurrence of postoperative complications of peripheral vascular complications, the nursing staff should do the following in the daily nursing process:

3.2.1 To closely observe the change of blood pressure

The nurses should pay close attention to the change of blood pressure, especially before and after extubation and before evacuation of the compression hemostat, the nurses should measure the blood pressure several times. When the blood pressure is stable, the nursing staff should actively cooperate with the doctor to remove the compression hemostat or extubation; if the blood pressure suddenly rises, the time of extubation or extubation of the compression hemostat should be prolonged.

3.2.2 To strengthen inspection

After operation, nurses should not only check whether there are bleeding symptoms around the puncture point, but also check the skin temperature and pulsation of dorsal foot artery. After the pressure bandage is relieved, it is necessary to carefully observe whether there is tenderness politics at the puncture point, whether there is mass or induration in the local area, and whether there is noise in the auscultation blood vessels. Sometimes it is necessary to measure the peripheral diameter of both thighs. As the bleeding will gradually penetrate into the soft tissues of thighs, the early symptoms are unclear and cannot be detected in time. In addition, attention should be paid to increase the intensity of observation, especially some minor symptoms after surgery should be carefully observed. For example, when nausea, vomiting and other symptoms occur, they should be treated in time, and patient are instructed not to squat. When the symptoms of low back pain appear, timely communication should be carried out, and nurses should massage more to relieve the pain. When the patient's pain is intolerable, it is necessary to take the medicine in strict accordance with the doctor's order to relieve the pain and achieve the sedative effect. If there is no bleeding complication, the pressure can be relieved 12 days later, and moderate exercise can be carried out.

3.2.3 To do a good job in health education

Nursing staff should take the initiative to communicate with patients and their families, and answer their questions in a timely and patient manner. At the same time, the nursing staff should inform the patient of the surgical process, treatment methods, intraoperative abnormalities and precautions in detail, and strengthen the preoperative and intraoperative visits. Before the operation, the urination on the bed was practiced to teach the tumbling skills and the braking time of the limbs to effectively prevent cough during operation. After the operation, the patient was informed to drink more water. When coughing and defecating, the puncture site should be pressed to avoid bleeding symptoms.

3.2.4 To assist the doctor to prepare before extubation

After the operation, based on the patient's condition, an appropriate amount of Xinweining was infused intravenously. Because anticoagulants were used before and during the operation, the risk of bleeding was large. Xinvinging should not be infused during extubation. In addition, we should actively communicate with the patient to observe the complexion and bleeding at the puncture site.

3.2.5 To prevent complications

After the operation, the nursing staff should regularly massage the patient's back and lower limbs to prevent the occurrence of venous thrombosis, relieve the numbness of the lower limbs, and improve the comfort of the patient. For patients with poor bowel movements, they should be advised not to exert too much pressure, gently massage the abdomen, and instruct the patients to drink honey water on an empty stomach to speed up bowel movements and avoid the occurrence of urine retention.

3.2.6 To improve nursing records

Nursing staff should record their observations in a timely, accurate, truthful and objective manner, especially it dynamically reflects the change of patients' condition and wound status under the abnormal condition of puncture site. For example, the range of subcutaneous hematoma, hardness, fluctuation, noise, and measurement of the circumference of both thighs.

3.2.7 To choose coronary intervention through radial artery

Liu Lixin, Bi Lei, et al. [5] found that the vascular complications of coronary intervention via radial artery and femoral artery decreased significantly, which was related to the absence of double blood supply of radial artery and ulnar artery in peripheral vein, nerve and palm.

In summary, the nursing staff should focus on observing whether there are peripheral vascular complications in patients undergoing femoral arterial intervention, and strive to actively prevent, promptly detect, and effectively deal with them, and try their best to prevent the complications and speed up the early recovery of patients.

Fund project

Shanghai pudong new area health and family planning commission health and family planning research project -- youth science and technology project, name: construction and evaluation of nursing plan to improve bed brake compliance of LEAD patients after PTA, no. : pw2017b-10

Conclusion

There are many reasons for the complications of peripheral vascular complications after the intervention of femoral artery. The nursing staff should strengthen the nursing, effectively prevent the complications and promote the patients to recover as soon as possible.

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