

Effect of modified braden score on prevention of pressure ulcer in patients with femoral neck fracture

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Abstract: Objective: To evaluate the effect of improved Braden rating scale in patients with total hip arthroplasty. Methods: Sixty patients with total hip arthroplasty were divided into observation group (n = 30) and control group (n = 30). Patients in the control group were evaluated by the Braden Score. The incidence of pressure ulcers and patient satisfaction were compared between the two groups. Results: By using the improved Braden score scale, the incidence of sore in the control group was significantly lower than that of patients. Conclusion: The improved Braden score can provide personalized nursing care for patients with femoral neck fracture and total hip arthroplasty, which can effectively eliminate the occurrence of pressure sore in high risk population.

Key words: Improved Braden score; femoral neck fracture; total hip replacement; pressure ulcer prevention

The aging population in China is getting serious due to the loose fracture caused by the incidence of fractures increased yearly. Femoral neck fractures in the fracture occupies a high proportion. To avoid the side effect of long term bed rest, the elderly need to have more activity and improve their life quality. Total hip arthroplasty is the best way to solve this disease. Due to the decline function of various organs of the body, the elderly tend to respond slowly, they have poor ability to self-care, low nutrient intake, the human tissue being pressure continually, blood circulation disorders, and prone to have bed ulcers.

Pressure ulcer will increase the patient's physical and mental pain, and reduce the quality of life. It also increases the economic burden of patients and their families. Therefore, one of the key tasks of nursing quality management is prevention of sore ulcer¹. Pressure ulcer risk factor assessment is used to screen and assess the risk of pressure ulcer. Xue Xiaoling² and other comparative studies have shown that Braden pressure ulcer risk factor assessment scale prediction is better and it is recommended in the clinical assessment of high pressure ulcer. Braden pressure ulcer score contains less content and the evaluation is not comprehensive. It is according to the characteristics of orthopedic patients, by consulting the relevant information on the pressure ulcer risk factor assessment table for local improvement.

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This study uses the improved Braden score scale on the hospitalized femoral neck fracture patients, taking effective measures to prevent and reduce the incidence of pressure sores.

1. Materials and Methods

1.1 General Information

60 cases of femoral neck fractures from June to December in 2016 were randomly divided into control group and experimental group. 30 cases of the control group, including 19 males and 11 females, the average age of 60.5 ± 10.2 . The experimental group is composed of 30 cases, including 21 males and 9 females, the average age of 60.8 ± 11.2 . No history of pressure, age, sex, education level, disease and bedtime of two groups of patients have no statistically significant difference.

1.2 Inclusion and exclusion criteria

1.2.1 Inclusion criteria

(1) age in 60-80 years (2) did not affect the skin before the skin observation and no pressure ulcers; (3) general anesthesia; (4) mental normal (5) no other basis diseases such as hypertension, diabetes

1.2.2 Exclusion criteria

(1) During admission has been suffering from pressure sores: (2) a history of pressure sores; (3) suffering from skin lesions affected by skin observation. (4) suffering from mental disorders, cannot take care of themselves (5) suffering from high blood pressure or diabetes

1.3 Methods

The control group was assessed with Braden score: mild risk (15-16 points), decompression dressings attached to the local skin, lying sponge mattress, hanging anti-pressure ulcer tag, spread knowledge to patients and their families; moderate risk (13-14 points), solve the problem of moisture, friction and shear; high risk (10-12 points), increase the number of turnaround, use of interactive air bed; very high risk (9 points below) in addition to the above measures, use of special automatic turning bed. In the experimental group, the orthopedic pressure ulcer risk scale plus skin graft table, risk classification and nursing measures were used as the control group.

According to the content and assessment method of the Braden scale, the risk factors associated with orthopedic patients were designed as orthopedic patients with pressure factor improved Braden assessment table (Table 1) and orthopedic skin (Table 2) is divided into positive and negative sides, the

front for the orthopedic patients pressure ulcer risk factor improved Braden assessment table and group care measures. Table 1 shows the total score of the risk range of extreme risk of 7 to 10 points, a high degree of risk 11 to 14 points, moderate degree of risk with 15 to 17 points, and mild risk with 18 to 20 points. To establish the transfer of each class for the score ≤ 14 points. Full training was given to all nurses in the department to master how to apply pressure ulcer score table and familiar with the various risks of interventions. According to the details of the score table, the scoring rules were interpreted by the general nurses until each nurse can skillfully apply the scoring table and the implementation of measures in place. The accuracy of the specific assessment was tested by reporting the case.

Table 1: Evaluation of risk factors for orthopedic pressure ulcers by the improved Braden score

Score	4 points	3 points	2 points	1 point
Age	less than 40 years old	40-60 years old	60-70years old	Above 70years old
Bed Rest Period (Postoperative days)	0-1day (>7d)	1-3days (3-7d)	3-7 days (1-3d)	more than7days (<1d)
Friction and shearing force	Bed sheets are flat	Sheets fold	Use Potty	Plaster, brace, traction
Nutrition and underlying diseases	Good	Obesity and diabetes	Weight loss and diabetes	Extreme weight loss and diabetes
Activities	Free activities	Help turn over	Forced half-lying	Absolute bed rest (forbidden to stand up)
Skin condition	Good skin elasticity	Dry	Occasionally wet	Incontinence
Compliance	Take the initiative	General	Poor	Weak

Note: 7-10 divided into extreme danger, 11-14 divided into high risk, 15-17 divided into moderate risk, 18-20 divided into mild risk.

Table 2: List of skin transcripts for orthopedic patients

Transfer table of Department of orthopedics skin in Huai An Second People's Hospital

Bed No.	Name:			Age:			Diagnosis:			Braden Score:		
Date Shift	Day			Small			Big					
	Skin Info	Take steps	Shift	Skin info	Take steps	Shift	Skin info	Take Steps	Shift			

The implementation of pressure sores risk plan for each class of nurses on the new admission or transferred to the patient score, ≤ 14 points, the bed hanging anti-pressure sores identification, and care unit whiteboard on the pressure column filled with bed number , to remind the class to be attached great importance. Fill in the pressure sores forecast, report the responsibility of nurses and head nurses, and patients and their families to communicate and sign. 24 hours to

report the wound care group and the record, targeted the development of pressure ulcers preventive measures, each class strict transfer of the patient's skin condition.

Strengthen the management of the link based on the results of the care measures taken by the head nurses daily check whether the implementation of nursing measures in place, whether appropriate, care records are complete, through the follow-up inspection, evaluation results are valid, and timely revision and improvement of preventive measures. Difficult patients, timely please wound stoma group consultation, to explore how to do targeted, and anti-pre-combination.

2. Evaluation index

Pressure ulcer occurred in the proportion of pressure sores diagnostic criteria I (congestion red period): (Skin redness): skin red, swollen, hot, numb or tenderness, relieve pressure 30min, the skin color cannot return to normal; II (inflammation of the skin Infiltration): skin redness and hardening, skin color into purple, epidermal blister formation; III (shallow ulcer period): epidermal blisters rupture revealing moist ruddy wounds, yellow exudate out; necrotic ulcer period): necrotic tissue black, purulent secretions increased, smell, infection to the surrounding and deep tissue expansion, invasion of the dermis and muscle layer, can be deep bones³.

3. Results

The incidence of pressure ulcer before and after improvement of Braden score, patient satisfaction, the incidence of pressure ulcers decreased significantly, the patient satisfaction was significantly improved (Table 4)

Table 4: The incidence of pressure ulcer before and after the improvement of Braden score, patient satisfaction comparison

Group	No. of Cases	Pressure Ulcer (%)	Stage				Level of Satisfaction (%)
			1 st	2 nd	3 rd	4 th	
Control Group	30	26.6	4	3	1	0	15 (30%)
Observation Group	30	6.7	2	0	0	0	29 (96.7%)

Notes: P < 0.05

4. Discussion

The use of the improved Braden rating scale reduces the incidence of pressure sores. Our hospital has been using the Braden Scorecard by observing the Braden Score scale of six scoring items, sensation, dampness, activity, mobility, nutrition, friction Force and shear force is more suitable for orthopedic patients with pressure sore prediction, but the feeling, moisture indicators cannot reflect the risk of orthopedic patients with pressure ulcers, and the other four projects

are not specific and intuitive. There are many patients with clinical Braden score is low risk, but the patient afraid of pain is not willing to move, resulting in the occurrence of pressure sores. Therefore, by reviewing the relevant literature⁴⁻⁸ orthopedic patients with pressure ulcers and age are closely related to bedtime (postoperative time), skin condition, nutrition and underlying lesions, activities, friction and shear, compliance 7 dangerous factors were designed as quantitative assessment of risk factors for orthopedic patients with pressure ulcers, nurses in the patient just admitted to the use of the assessment table to assess the patient, according to the assessment results to take personalized care measures, and high-risk groups to focus on prevention, and thus greatly Reduce the incidence of orthopedic patients pressure ulcers. It can be seen from Table 4 that the incidence of pressure ulcer in the experimental group was lower than that in the control group.

The use of pressure ulcers risk factors improved Braden rating scale can be based on the specific circumstances of the patient to develop individual care measures in the past orthopedic bedridden all patients were turned every 2 hours, for nurses to increase the workload of nurses, and enhance the nurses career Fatigue, so that the prevention of pressure sores in fact not in place; for patients, the number of turn over too frequent, increased the patient's pain, the night cannot get enough rest, the patient's satisfaction decreased; according to the evaluation results for ≤ 16 points Of patients using the orthopedic patients skin transfer shift record table, orthopedic patients skin transfer record table design and application to ensure that the prevention of pressure sores have a certain continuity. Especially in the care of human resources is relatively lack of night; for the safety awareness of indifference, poor sense of poor young nurses, skin transfer record application can play a reminder to remind the patient in accordance with the day responsible nurses to implement the appropriate care. The record table to implement the transfer of double signature, so easy to clear the responsibility of each class, who succeeds who is responsible for the principle, prompting each nurse to take over and take all the patients to implement the measures, not only to ensure the continuity of pressure sores prevention, Also improved the satisfaction of nurses and patients The use of pressure ulcer risk factors improved Braden rating scale is the head of the management, nursing management of the scientific and objective is to ensure that the correct implementation of the assessment of the premise of the head of the daily five rounds of the implementation of key inspection measures, according to the actual situation Nursing quality control committee meets every month to analyze the existing problems and propose improvement measures, and constantly improve, and gradually improve the nurse pressure ulcers prevention awareness and ability.

5. Conclusion

In summary, through the implementation of improved Braden score table can be quantified, with intuitive, simple, close to clinical and other characteristics, the post-treatment to the previous prevention, the ≤ 16 points below the patient strictly written bed shift the system, the ≤ 12 points below the patient to seriously implement the pressure sores forecast system to improve the nursing staff on the pressure sores attention to the problem, so that pressure ulcer prevention more planned, targeted, so that the focus of clinical care work. It greatly reduces the incidence of pressure sores, improve patient satisfaction, improve the quality of clinical care. It is worthy of clinical promotion and use.

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