

A case of home care of a 103-year-old patient with Alzheimer's disease complicated with stage III pressure ulcer

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Case Study

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ABSTRACT

This paper reported a case of home care for a 103-year-old AD patient with stage III pressure ulcers. After ten weeks of professional home care, including the guidance for caregivers, such as posture putting, wound decompression, nutritional support, clinical nurse specialist come to home to give wound assessment and care, the ulcer was eventually healed. It is suggested that for the senior AD patients, intelligent auxiliary equipment can be introduced into the family in the future, it can help reduce the pressure of the affected side, reduce the burden on caregivers, meanwhile, wound specialist nurses came to the caregiver to give systemic instructions, prevent the occurrence and development of pressure ulcers.

Key Words

Alzheimer's disease, centenarians, pressure ulcers, home care

Implications for Practice:

1. What is known about this subject?

The prevalence of pressure ulcers in long-term bedridden elderly AD patients is high, and the ulcer is difficult to heal.

The home care of pressure ulcers could meet needs of patients and promote the rehabilitation of the disease.

2. What new information is offered in this review?

This case introduced Seamless Hospital-Community-Family Linkage Nursing Model, and the ulcer of an elderly AD patients in this case healed.

3. What are the implications for research, policy, or practice?

Suggest long-term bedridden elderly AD patients follow the mode of this case, and add medical expenses to health care content.

Case report

Introduction

Alzheimer's disease (AD) is a neurodegenerative disorder characterized by degeneration of the central nervous system with neuropsychiatric symptoms such as, cognitive, behavioral and neurological disorders, and neurological defects such as hemiplegia, sensory loss and visual field defects¹The prevalence of AD is 5.9 per cent in people aged 65 years and older in China²The incidence of AD was positively correlated with age, and the incidence of AD increased by 1.06 times³ every five years. Studies have shown that the prevalence of pressure ulcers in long-term bedridden elderly AD patients was as high as 20 per cent –50 per cent, and there was a gradual increasing trend⁴The home care of pressure ulcers could meet needs of patients and promote the rehabilitation of the disease.

Clinical data

The female was a 103-years-old teacher with a bachelor degree. She was on the bed for a long time, and suffered from AD for 23 years. And the score of her daily living activities was evaluated as zero⁵ though she used the air bed; the pressure ulcer under her right scapula did not improve at all during three months. Considering the patient with a high age, her family members hoped she could receive professional wound care at home. By the

cooperation between the Community Health Service Center and Wound Care Outpatient of Tertiary Hospital, they decided to send specialist nurses to offer the home service. After 10 weeks of wound caring, the ulcer was eventually healed.

Assessments

Pressure ulcers assessment

A 10cm×6cm×0.4cm staged III⁶ could be seen under the right scapula. The full-thickness skin was damaged and spread to the subcutaneous and deep tissue. Yellow exudate was oozing from the dermal wound of the ulcer. The surface of the skin was covered with yellow carrion and pus. The edged skin of the wound was red and swelling and the necrotic shallow tissue caused the ulcer.

General assessment

The patient was unconscious and limited with limb movement, also had incontinence and limb contracture. The amount of White blood cell in her body was $8.9 \times 10^9/L$, and 60 per cent of them are neutrophils. The content of the Red Cell is $3.25 \times 10^{12}/L$, $204 \times 10^9/L$ for the Platelet, 105g/L for the Hemoglobin, 45.5g/L for the Total Protein, 24.1/L for the Albumin and 6.0mmol/L for the Blood glucose. The patient was with Hypoalbuminemia, which was the main reason to hold back the healing of ulcer. Meanwhile, the patient had a difficulty swallowing, and always choked while drinking.

Family and Social Assessment

Patient lived in a 118-squaremeters house with two-bedrooms and a living room. The bedroom area was 24m², the light and ventilation condition was excellent. The patient lived with her daughter and was accompanied for 24 hours by a home caregiver who lacked professional knowledge of nursing care. The financial condition of the patient's family was good.

Nursing

Caregiver guidance

Wound specialist nurses came to the caregiver to give some systemic instructions. They taught the caregivers how to use the air bed correctly, and how to help the patient turn over and have a comfortable posture. Lying on the side should be avoided to reduce the pressure of the affected side. While turning over, the caregivers should keep the wound and its surrounding clean and dry, and inspect whether there was a seepage or degranulation on the dressing as well. The caregivers needed to provide sufficient nutrition to patients every day and use enteral nutrition preparations to strengthen nutrition intervention, which was rich in protein, fat, saturated fatty acids, essential fatty acids,

carbohydrates, dietary fiber and a variety of minerals and vitamins. They needed to mix it with food and feed the patients four times a day and 50ml each time to prevent them from choking.

Pressure ulcers care

Reasonable debridement requires to completely removing the highly proliferative keratinized tissue, dead and infected tissue around the wound, until the normal fresh tissue or uninfected tissue expose. After that, gently wipe the wound and use injector to spread normal saline to wash the base of the wound, which can help remove necrotic tissue, and fully expose the wound. Then, use the silver dressings to control bacterial infection and reduce bacterial load. The outer layer should be covered with the foam dressing and in need to be changed every three days (***Change timely when the degranulation happened**). Meanwhile, rub the Sanyrene around the wound twice a day in the morning and evening respectively. When wound was found healing, and the fresh granulation begins to appear, replace the hydrocolloid dressing for external use.

Discussion

The urgency of home care of elderly patients with home pressure ulcers

The elderly AD patients with cognitive dysfunction cannot cooperate the treatment and care; and the difficulties of their movement makes it hard to move them between the hospital and home, which increases the burden of care. Based on these, home rehabilitation care is the first choice for their family members. Therefore, it is essential to instruct and train the caregivers correctly. As a result, they could place the body in right position to reduce the pressure of the susceptible areas, and improve the monitoring of the susceptible areas as well.

Nutritional support plays an important role in home care to prevent pressure ulcers

Senior AD patients cannot express their nutritional needs in terms of diet, which brings great difficulties to the healing of pressure ulcers. Malnutrition is not only the main risk factor of pressure ulcers, but also the main influence of the healing of pressure ulcers. The nutritional support can accelerate the healing of the wound through the daily intake of high quality protein, such as fish, lean meat, soy products and so on. In addition, patients need to pay attention to the intake of carbohydrate and trace elements, and the balance of the water electrolyte.

Seamless Hospital-Community-Family Linkage Nursing Model can meet patients' needs of home care

Seamless Hospital - Community - Family Linkage Nursing Mode can effectively prevent patients from the disconnection of nursing intervention in the family. Hospital, community and family can use this platform to develop the disease management and interaction, which fully meets the needs of following care of the patients after they leave hospital. At the same time, this model can effectively reduce the cost of health care, rationally use health resources to reduce the financial burden of the family and improve the service quality.

Summary

In the process of home rehabilitation for the senior AD patients, we should improve the professional training to the caregivers. It is suggested that intelligent auxiliary equipment can be introduced into the family in the future and fully activate the enthusiasm of caregivers, which allows the patients to receive professional care in a familiar environment. This case took the advantage of home care, and removed all factors which may hold back the healing of the wound effectively. Meanwhile, the nutrition support of the entire body, effective management of wounds and reasonable application of materials, promoted the rehabilitation of the wound.

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CONFLICTS OF INTEREST

The authors declare that they have no competing interests.

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PATIENT CONSENT

The authors, Wang Z, Li M, Bai J, Lu X, Wang B, declare that:

1. They have obtained written, informed consent for the publication of the details relating to the patient(s) in this report.
2. All possible steps have been taken to safeguard the identity of the patient(s).
3. This submission is compliant with the requirements of local research ethics committees.