



## A case of IV degree on acute radiation dermatitis in China

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### ABSTRACT

This report investigates the nursing procedure of a case of adjuvant therapy of rectal cancer on IV degree of acute radiation dermatitis patients in the penis and scrotum junction. The lesion degree gradually increased. Fixation of the dressing was difficult in the penis and scrotum junction. The concept of wet healing with new dressings was used in patient. The silver ion dressings were used in inhibiting infection, and the wound was covered by the rimmed foam dressings. When it comes to the shaping period, water gel transparent paste was applied instead to cover the wound.

The patient was just into the surgical treatment in the wound healed after six days.

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## 1. Introduction

Rectal cancer is one of the most common malignant tumors of the digestive tract [1]. Local recurrence rate has been as high as 45% to 65% after cure [2]. Neoadjuvant therapy can make the tumor downgraded to improve the radical resection rate, reduce local recurrence and increase the chance of preserving the anus sphincter. Preoperative neoadjuvant therapy is particularly important [2]. There is no consensus to the interval time between neoadjuvant therapy and surgery [3]. A French study shows that pathological downgrade is significant in six and eight weeks [4]. The radioactive dermatitis is one of the most common reactions in tumor radiotherapy, and incident rate is very high [5]. Radiation damage has the potential, persistent, progressive characteristics and brings a lot of difficulties in wound treatment [6]. It also brings great pain to patients. In particular, unhealed wounds affect the continuity of treatment, which causes serious increase in the spiritual and economic burden on patients and their families [7]. The purpose of this treatment is to reduce the radiation damage, renew radiation dermatitis and ensure the smooth resumption of surgery.

## 2. Case report

Male, 56 years old, admitted to hospital on December 20, 2014. The examination was diagnosed as median located rectal cancer. Patients complained: Penis and scrotum intersection appeared ery-

thema, itching, and appeared ulcers about 0.5cm × 0.5 cm after neoadjuvant therapy. The doctor bound the wound with gauze, which made no improvement. Accepted by the dermatologist, ulcers face continues to expand, pain-sensitive, discomfort in one week (Fig. 1) Located in the penis and scrotum intersection, ulcer surface was 2cm × 1.5 cm, Leakage was very small.

## 3. Results

### February 25, 2015 Treatment Status

Saline was firstly used as a traditional way to clean the wound, which led to no progress but deterioration. Therefore, silver ion dressings were decided to replace saline to stop infection. Saline was firstly used as a traditional way to clean the wound, which led to no progress but deterioration. Therefore, silver ion dressings were decided to replace saline to stop infection. Water gel was afterwards applied to activate silver ions. Because traditional gauze dressings were easy to fall off and cause pain, rimmed foam dressings were chosen to absorb excessive water gel and fix both tightly and flexibly (Fig. 2). It was regularly practiced to change the dressings every two days and make careful observation.

### February 27, 2015 Treatment Status

Yellow tissue disappeared at wound surface and changed into 100% red. Wound area made no significant change. According to the patient statements, the dressings pasted well and comfortably, except for tingling at the wound during the night. It was suspected, after observation and analysis, that the irritation of the tissue in the hydrogel caused pain in the patient. Thereafter, in the following experiment, sterile water was used as the silver ion activator (Fig. 3).

### March 1, 2015 treatment Status

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**Fig. 1.** Scrotum intersection.



**Fig. 4.** March 1, 2015 treatment Status.



**Fig. 2.** February 25, 2015 Treatment Status.



**Fig. 5.** Affected area recovery situation.



**Fig. 3.** February 27, 2015 Treatment Status.

It could be seen from Fig. 4, the new dressing method brought us a big surprise, the wound much smaller, the skin crawling condition good with no exudate. There were no uncomfortable symptoms at the wound after the dressing, according to the patient. In order to promote healing of the wounds and to avoid friction, a transparent coating hydrocolloid was used to cover the wound because

the hydrocolloid dressings could provide a closed wound oxygen humid healing environment, reduce wound adhesions and pain and speed up the wound epithelial creeping speed [6].

#### March 3, 2015 Affected area recovery situation

The hydrocolloid dressing would fall off on its own, and the wound completely healed (Fig. 5). The operation was successfully carried out after a week, and the wound healing recovered well.

#### 4. Discussion

The concept of wet healing has been widely used in clinical wound care [8]. At the same time, a variety of new dressings should also be created to meet a variety of wound needs, and provide adequate protection for wound care [9]. And our medical staffs are to continue to learn and carefully select the best approach to achieve the most satisfactory treatment, increasing patients' comfort and ensuring the smooth progress of treatment. This reported a case of IV degree on acute radiation dermatitis in China. The work has been reported in line with the SCARE criteria [10].

#### Conflicts of interest

No any conflicts of interest.

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**Ethical approval**

This article has been agreed to patient families and Ethics Committees.

**Consent**

This article has been agreed to patient families.

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