Experience with MEBT/MEBO in treating penis and scrotum skin soft tissue laceration

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【Abstract】Objective: To observe the efficacy of MEBT/MEBO in treating penis and scrotum skin soft tissue laceration. Method: 68 cases of penis and scrotum skin soft tissue laceration were divided into 2 groups. Thirty-six cases in group A were treated with MEBT/MEBO and 32 in group B (control) were treated with iodine complex (highly effective iodine). The efficacy of the 2 groups was compared in terms of wound healing time and style, formation of scars, sexual function preservation and the pain stopping effect of the drugs and side effects, etc. Result: MEBT/MEBO treatment was superior to iodine complex treatment. MEBT/MEBO group had shorter wound healing time, fewer scars, less pain, lower infection rate of the wounds, better sexual function and no marked adverse effects. Conclusion: MEBT/MEBO is the best method for treating penis and scrotum skin soft tissue laceration.

【Key words】MEBT/MEBO; Highly effective iodine; Male genitals; Skin soft tissue laceration

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Inland He Renliang et al [1] reported that MEBO provided satisfactory curative effect in emergency treatment of 154 cases of skin soft tissues laceration on protruding and easily-exposed parts, namely elbows, buttocks, faces, knees, legs, hands, feet and cervixes. However, there was no report about using MEBO in treating skin soft tissues laceration on penis and scrotum that are located at concealed positions with relatively much body wrinkles. We had treated 68 cases of skin soft tissues laceration on penis and scrotum in our hospital since August 1996 to August 2003. Among them, 32 cases were treated with wet dressing therapy with highly effective iodine while the other 36 cases with MEBT/MEBO. Hereinafter, we report it in detail.

1 Data

Sixty-eight cases, male, 5-62 years old, the average age in the treatment group is 32 years old, while in the control group is 29. Forty-five cases were injured by traffic accidents and 23 by falling from high. They were injured with 2-9, averagely 5, wounds on penis and scrotum which were 12-40 cm² in sizes, averagely 28 cm² in size. Among these, 8 cases were complicated with fracture of pelvis, 5 with perineum laceration, 3 with rectal injury, 2 with testical contusion, 2 with contusion of bladder, 1 with fragmentation of urethra, 3 with splenic rupture, 2 with contusions of kidneys, 1 with contusion of liver, 1 with the syndrome of upper vena cava extrusion, 16 with fracture of other parts and 49 with other soft tissue injuries.
II Method

Firstly, we saved the patients’ lives and provided emergent systemic treatment to patients who were complicated with viscera injuries using antibiotics and hemostyptic. Then, for the control group, after debriedement, the wounds at the penis and scrotum were hydropathic compress or exteriorly applied with highly effective iodine 3 times a day according to the particular conditions, while in the treatment group, the wounds were directly exteriorly applied with MEBO 4-6 times a day with a thickness of 1-2 mm. At the same time, “Three –timely-principle” must be complied, i.e. timely removal of liquefied matter, timely removal of necrotic tissue and timely application of the drug. Between the two groups, contrastively observed: ① the modes and time of the wound healing, and the information of scar formation; ② acesodyne effects; ③ infection rate of the wounds; ④ preservation of sexual functions; ⑤ side effects of the medicine.

III Result

1. All the wounds in the two groups healed physiologically and there was no obvious difference in healing area. However, there was notable difference in wound healing time ($P < 0.001$). The average healing time of the treatment group was 7.5 days while the control group was 12.3 days. Moreover, the scar number of the two groups also had marked differences ($P < 0.001$). Eleven cases (occupying 34.37%) in the control group while 5 cases (occupying 5.55%) in the treatment group developed scar formation. Later on, the scars were intenerated by MEBO Scar Reducer.

2 Observation of acesodyne effects after drug application: the standard was classified according to acesodyne effect classes, i.e. after drug application, the one can alleviate pain in 5 minutes belongs to excellent class, in 10 minutes belongs to fine class, in 15 minutes belongs to general class, in 30 minutes belongs to poor class and more than 30 minutes belongs to extremely bad class, the acesodyne effects of the two groups were different with each other ($P < 0.001$). Thirty-two cases (occupying 63.88%) in treatment group while none in control group belonged to the excellent class.

3 Infection rate of the wounds: In treatment group, 2 cases underwent cambium necrosis. Its total infection number was 2 cases and the total infection rate was 5.55%. Contrastively, in control group, 3 cases suffered from cellulitis at the edge of wounds, 6 cases from pyogenesis beneath scars and 8 cases from cambium necrosis. Its total infection number was 17 cases with total infection rate of 53.12%. Consequently, the index and total infection rates of the two groups had obvious differences ($P < 0.001$). The rates of the treatment group were lower than that of the control group.

4 Preservation of sexual functions: there were obvious differences between the two groups ($P < 0.005$). Three cases in control group while none in treatment group
underwent erection dysfunction caused by the contracture and malunion of the scars on the penis.

5 Side effects of the medicine: There were clear differences between the two groups (P < 0.005). Particularly, in treatment group, none had anaphylaxis, such as contact dermatitis and urticaria, and 6 cases had pigmentation on the healed wounds, while in control group, 12 cases had contact dermatitis and wound pruritus, 15 cases with aggravated pain and 17 cases with pigmentation on the healed wounds.

IV Discussion

Male external genital organs mainly consist of penis and scrotum. Because the parts are located at concealed positions and have more wrinkles, it is not easy to remove necrotic tissue layers on wounds after injured. However, the application of MEBO can liquefy and discharge the necrotic tissues on wounds to guarantee the clear and free drainage of the wounds. Simultaneously, a moist physiological environment is formed around the wounds, which starts the growth of stem cells on wounds to regenerate skin tissues in situ. This ensures the wounds healing in the shortest time. The average healing time of the treatment group was 7.5 days.

Penis and scrotum at perineum, as one of the sensitive parts of human body, are easy to feel violently pain after injured for there are abundant blood vessels, nerves and voluntary muscles. MEBO supplies a moist physiological environment around the wounds which can protect the pain nerve terminals from the stimulations of dry environment and improve the microcirculation of tissues to abate the stimulations and pressures toward the nerve terminals caused by hypoxia and edema. As a result, MEBO, with acesodyne and anti-itch functions, can quickly lessen the pain of the wounds. After drug application, cases with pain alleviated in 5 minutes account for 63.88% of the treatment group.

Penis and scrotum at perineum are the areas easy to be contaminated by stool and urine. The application of MEBO can not only protect and isolate the wounds from direct contaminations by stool and urine to reduce the contaminative chances of wound environment, but also can freely drain, prevent and treat internal issues and the infections caused by liquefied matters on the wounds to provide an environment as flowing water does not get stale to the wounds. The moist environment can help liquefy and discharge the necrotic tissues from the superficies to the interior to avoid the absorption of toxins through the wounds, so it provides a fine environment for the viability of survival epidermis tissues. β-sitosterol and other components contained in MEBO have anti-inflammatory action because they interact with substrate to make bacterium mutate and lose toxicity quickly to become non-invasiveness. MEBO can inhibit and control the growth and reproduction of all the general pathogens to achieve the anti-inflammatory functions. The infection rate of the treatment group was merely 5.55%.
MEBO can reduce inflammatory reaction of wounds and overcome the negative stimulations to the wounds that treated by occlusive dressing, during which the wounds are will mechanically injured when wound dressings are changed, so it lessens the scar formation on the wounds. MEBO can get rid of hyper-oxyradical which impacts the stability of tissues, better the partial environment of oxygen supply around the wounds and promote the integrative healing of the wounds so as to reduce scar formation. MEBO regulates and controls the hyperplasia and arrangement order of celluloses to make epithelium of survival glands regenerate and differentiate to basal layer cells in surface layer, and finally the wounds epithelized gradually. This complies to the rules of skin natural regenerative repair, reduces scar hyperplasia\(^4\) and obviously decreases the disability rate. Three cases in the control group while none in the treatment group underwent erection dysfunction caused by the contracture and malunion of the scars on the penis.

In the treatment group, the side effects of local discomfort, such as contact dermatitis and pain caused by MEBO were evidently lower than that in the control group. This shows that MEBO is the preferred external used medicine because it provides an ideal effect with low side effect in treating contused & lacerated wounds of the skin soft tissues.

References


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