Clinical Experience with MEBO in Treating 248 Cases of SunBurn

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[Abstract] Purpose: Observe the therapeutic result in treating sun burns with MEBO. Method: Treat 248 cases of sun burns during sea training with MEBO from 1998 to 2001, topical apply every 4 to 6 hours. Result: Except 8 serious cases been transferred to higher medical unit, rest 240 cases all received treatment in our unit. The average healing duration of superficial II degree lesion is 7.84±2.58 days. Conclusion: Therapeutic result of treating sun burns with MEBO is reliable, convenient and easy to administrate. [Key Words] sun burns MEBO therapeutic result

From 1998 to 2001, our clinic took responsible for medical service of army during sea training and admitted 623 patients, 248 cases, 39.8%, of them are sun burns. We use MEBT/MEBO and acquired satisfied results. The conclusion of the observation is followed:

Clinical Significance

1. General Information: All 248 cases are male, age ranges from 18 to 44 years old, average age is 21 years old. 197 soldiers, 101 patients, 51.3%, are 1-year-service solider. 142 patients, 72.1%, are soldiers that participate in sea training first time.

2. Sun Burns Condition: All result from the violate sun exposure during sea training that cause skin damage. Maximum skin damage area is 65% TBSA, while minimum area is 5% TBSA, and average area is 22.5%±12.6% TBSA. At admission, there were 1 shocked and 85 cases with siriass symptoms. 139 cases, 56.05%, of simple I degree sun burns, erythema was the major finding, complied with desquamation; 107 cases, 43.15%, of superficial II degree sun burns, vesicles can be found at skin damage, 2 cases , 0.8%, both were warriors, complied with deep II degree sun burns.

Treatment

1. Topical Treatment: Major therapy was applied MEBO that invented by Beijing Bright Chinese Medicine Institution of Burns Wounds & Surface Ulcers. Irrigated the lesion with normal saline to remove remained sea water, dried up and then applied MEBO directly on the lesion. Ointment thickness reached 1mm, and changed dressings every 4 to 6 hours. Cleaned away the remained ointment or exudates on the lesion by cotton or gauze before dressings changing. Patients of superficial II degree with vesicles directly applied the ointment after released the blister fluid in low
position. Patients of deep II degree transferred to higher-level hospital after lesion management. Patients of I degree sun burns returned to army and kept changing dressings by themselves after instruction. Abided by the non-invasive principle all through the treatment and avoided using any invasive or stimulated drugs and methods.

2. General Treatment: Major target is antiseptic and antalgesic, including early treatment, full rest, shock prevention, fluid supplement, fluid and electrolytes equivalence, prophylaxis, and specific Chinese medical therapy, etc. Patients of siasis and fever, fist of all were cooling and fluid supplement, then managed lesion after condition stabled. Routine general prophylaxis for cases that total sun burned area over 20% TBSA. Considered significances of sun burns and sea water bathe, no matter infected or not, administrated stronger and broad spectrum antibiotics with full process (5 to 7 days) as larger or deeper sun burned area. Be aware of the ventilation and humidity of the therapeutic environment, and took self-made Chinese herbal drinks by oral everyday. Treat respectively to those of server dehydration, convulsion, and skin allergy.

Therapeutic Results

1. Healing and Outcome of the Lesion: Cases in this group, 240 cases cured, 8 cases transferred, total cure rate is 97.6%. Healing duration of superficial II degree is 7.84±2.58 days, without escharation. Among the cases of this group, 3 cases occurred erythra surround the lesion, 2 cases had skin allergic reaction.

2. Morbidity of Topical Infection and Adverse Effect: Lower morbidity of topical infection by using MEBT, 6 cases in this group all happened during dressings changing by themselves of I degree sun burns, main reasons are pruritus, improper environment, sweating and improper dressings changing. No general toxicity and adverse effect on large area sun burned in-patients. Morbidity of infection is 2.5%.

3. Antalgesic Effects: According to the observation, topical pain had relieved in different degree after applied drugs. Mild to moderate patients complaint neither algesia nor topical bleeding without adminstration of antalgesics during treatment or dressings changing.

Discussion

Sun burns equal to solar dermatitis, categorized in “sun burned disease” according to the Chinese medical theory, also called “sun burned sore”. The main reason is sun exposure, that skin is invaded by “Yan heat with dampness toxin”, the “wind-dampness heat” retained in the skin and leads to prurigo, eczema, or inflammatory erythema, with topical higher temperature and slightly swelling. Strong sun light contains various UV ray in different wave length that all may damage human skin. Sun burns during sea training are damages result from long-time skin exposure to various excessive UV radiations, and are similar to superficial burns and
scalds that might occur desquamation and vesicle.

Sun burns is also a kind of burns, we topical administrated MEBO, which differed from the formerly administration of JingWanHong ointment, Bactroban ointment, Green ointment, Silver Sulfadiazine(SD-Ag) cream, Compositus Mentholi cream, Compound Dexamethasone Acetate ointment, and self-made Chinese herbal decoction. Reviewed analysis found that MEBO gained better therapeutic results than other therapy. According to the literature report, MEBO possessed almost equal ability as normal skin of preventing evaporation of the lesion[1], at the same time, decreased stress response of the organism, improved microcirculation, reduced evaporation of the lesion as well as general capillary exudation, improved hemorheology index. MEBO reduced evaporation as well as provided an approximate physiological environment [2], and kept a better permeability without affecting topical drainage of metabolites and substance exchanges. As the treatment continued, liquefaction from internal and external of the superficial necrosis that enabled necrosis and MEBO turn into liquefaction to drain and float on the surface of the lesion, thus, can be successfully removed during dressings changing. Besides, MEBO has antiseptic feature under humid environment that declined infection morbidity and benefited lesion repair. Administration of MEBO can realize physiological regenerative repair of the lesion and shorten the healing duration. Lesion of superficial II degree had no escharation. In summary, MEBO has advantage of convenient, feasible, as well as reliable therapeutic result, etc. Therefore, it worth promoting.

Reference


[Authors' Brief Introduction]
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