MEBO for Treating Herpes Corneae

Wang Bo

Abstract: Objective: Observe therapeutic effect of MEBO for corneal herpes zoster and explore new therapies. Method: 23 cases (29 eyes) in treatment group were treated with MEBO on the basis of conventional treatment; 22 cases (28 eyes) in control group were treated with conventional therapies. Result: Patients in both groups were cured, with pain relieved in 22 cases (28 eyes) in treatment group, relief rate 95.7%, and only 14 cases (20 eyes) in control group, relief rate 63.6% (P < 0.05). In treatment group the course was also much shorter than in control group (P < 0.01), with fewer complications in the cornea. Conclusion: MEBO has reliable effect for corneal herpes zoster, easy to operate and worth extending.

Keywords: MEBO, corneal herpes zoster, therapeutic effect

Herpes zoster is an acute dermatitis caused by virus. If treated improperly and in severe cases, especially when it affects the first division of the trigeminal nerve, it can attack the cornea as well as causing intolerable pain, impairing the eyeball and causing inflammation of the entire eyeball, corneal ulcer and blindness. Traditionally the disease is mostly treated with anti-virus medicine administered by mouth or as eye drops. The course is long, and the pain often cannot be relieved, causing extreme pain to the patient. Since January 2000 our department has been applying MEBO on the basis of former therapies, having achieved good effect, as reported below.

I. Clinical Data

1. General data: All cases in this group were confirmed by skin doctors, matching the diagnostic criteria of herpes zoster proposed in Dermatology (3rd edition) written by Wang Guangchao. They were randomly divided two groups: 23 in treatment group including 17 males and 6 females, age 19-65 or 43.5 on average, with time between onset and primary diagnosis being 12 hours to 3 days; 22 in control group including 15 males and 7 females, age 14-63 or 42.5 on average, with time between onset and primary diagnosis being 8 hours to 3.5 days. The two groups were comparable.

2. Treatment method: treatment group: intramuscular injection of vitamin B1, B12, oral administration of anti-viral tablets; topical medicine: smear MEBO to cornea surface with eyelid-purpose glass rod once every 2-6 hours according to severity, without bandaging, till corneal inflammation disappears and fluorescein staining shows negative. 23 cases (29 eyes) healed without corneal macula. For control group systematic medicine was the same as treatment group, plus 4% anti-virus eye drops and antibiotic eye drops as topical administrations. 8 cases (10 eyes) in this group that healed were left with corneal nebula or macula.

II. Treatment Result
The above cases all healed. Their pain relief, course and corneal macula/nebula complications are listed in Table 1.

III. Discussion

Corneal herpes zoster is due to the formation of different shades and forms of corneal opacity or corneal ulcer caused by infection of herpesvirus. It is a common eye disease that can lead to blindness. As a highly effective burn medicine, MEBO is mainly composed of obakulaactone, β-sitosterol, sesame oil and beeswax. According to its pharmacological properties, the mechanism for its remarkable effect is analyzed as follows:

1. Analgesic effect: MEBO protects wound surface and isolates it from the air. This helps to reduce the irritation to the exposed nerve endings on the surface, and also provides a moist environment to prevent desiccation of nerve endings. This pharmacologic effect makes nerve endings less sensitive and alleviates pain [1, 2].

2. Anti-infective effect: the dual-state transformation of the medicine effectively isolates wound surface to keep it moist but not macerated, lowering the chance of bacterial infection. The timely discharge of wound secretions through active and passive drainage reduces the amount of bacteria and inhibits bacterial activity.

3. Improve microcirculation and promote wound healing: MEBO creates a good environment for epithelial regeneration by keep wound surface moist, preventing loss of water and microminerals, and avoiding wound desiccation and cell dehydration. A moist environment also ensures the drug’s effects of invigorating blood circulation, removing necrosis and regenerating tissues, and promotes recovery of microcirculatory functions and tissue duplication at the site of stasis, preventing progressive necrosis of wound tissues.

4. Prevent formation of corneal macula: With an adhesive structure of big molecules, MEBO has affinity for proteins on wound surface. It both acts as a bridge and directly induces orderly division and moving of cells to promote wound healing. It contains substances necessary for wound repair, such as glucose, which can make up for energy deficiency, and vitamins and organic acids, which can directly provide topical nutritional support in prevention of scarring.

5. Promote stem cell regeneration on the edge of cornea: MEBO can activate dormant potential regenerative cells (PRC) of cornea, ensuring scarless healing and natural repair of the site of infection [3]. On the basis of the above mechanisms and the etiologic similarity between corneal herpes zoster and burn wounds, we applied MEBO to the treatment of corneal herpes zoster, and believed that we have achieved good effect in such aspects as relieving pain, shortening course and preventing corneal macula, and that the practice is worth extending.

Bibliography


**About Author**

Wang Bo (1972 – ), female (Han Nationality), from Baoding, graduated from No.2 Military Medical University of PLA in 1995, oculist.

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<table>
<thead>
<tr>
<th>Group &amp; cases (N)</th>
<th>Pain relief cases (%)</th>
<th>Eyes</th>
<th>Course (X±S)(Days)</th>
<th>Corneal nebula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Group</td>
<td>22 (95.7%)</td>
<td>29</td>
<td>4.5±2.159</td>
<td>0</td>
</tr>
<tr>
<td>Control Group</td>
<td>14 (63.6%)</td>
<td>28</td>
<td>8.5±1.204</td>
<td>10 eyes</td>
</tr>
<tr>
<td>P value</td>
<td>P &lt; 0.005 (X2 = 5.342)</td>
<td></td>
<td>P &lt; 0.01 (F = 9.643)</td>
<td>P &lt; 0.05</td>
</tr>
</tbody>
</table>

Notes: (1) Pain relief rate is calculated with the calculating equation for a small sample. Significant difference between two groups. (2) There is much difference between two groups in days of course. Low value calculating method is used. Significant difference between two groups in mean value. (3) Use C to stand for corneal nebula. Significant difference between two groups.