The Efficacy of MEBO in Treating Neonatal Diaper Dermatitis

Ma Liqiong¹, Pu Yi²

1. The Affiliated Hospital of Yunnan Dali Medical College (761000)
2. The People’s Hospital of Gejiu City Yunnan Province

[Abstract] Objective: To investigate the efficacy of MEBO in treating neonatal diaper dermatitis. Method: 74 cases of neonatal diaper dermatitis were divided into two groups randomly and treated respectively with MEBO and Lan You Ting Ointment. A comparison of the efficacy of the two groups was made. The results revealed that MEBO is superior to Lan You Ting Ointment in terms of effective rate within 10 days and curative rate. The difference between the two groups was very significant (P<0.001).

[Key Words] MEBO  Diaper Dermatitis

Diaper Dermatitis is a common neonatal disease. Treating local wounds correctly can effectively prevent local infections and accelerate the healing of wounds. The authors of this paper have treated 38 moderate and severe neonatal diaper dermatitis patients with MEBO during the September 1996 to October 1998 period and at the same time run a control group treated with Lan You Ting ointment. A comparison of the two groups reveals that the curative effect of MEBO is superior to Lan You Ting.

I. Clinical Data

1. General Information: There are 38 patients, 20 boys and 18 girls in the treatment group; 36 patients, 15 boys and 21 girls in the control group. These newborn babies are 5 to 28 days old. Number of days between the onset of the disease and the start of treatment are 13.5±3.8 days for the treatment group and 15.9±4.2 days for the control group. The duration of illness indicates no meaningful difference between the two groups (P>0.05).

2. Patient Condition Categorization Criterion: Light: red skin with millet like rash set within two or three centimeters around anus. Moderate: whole hip is affected, or skin eruptions fused into patches. Severe: rash spreads to the upper inner thighs and lower abdomen, and the skin of external genitalia exfoliate with exudation. Judging from the above standards, there are 22 moderate diaper dermatitis cases and 16 severe cases in the treatment group; 17 moderate cases and 19 severe cases in the control group. There is no marked difference in terms of patient conditions between the two groups (x²=0. 843, P>0.05).

3. Treatment Method: The treatment group used MEBO, 40g a piece, produced by Beijing Guangming Traditional Chinese Medicine Burn and Ulcer Research Institute. Cleaned the wounds with lukewarm water, wiped them dry, and applied MEBO to the
thickness of about 1mm to the affected area with sterile tampon (or cotton stick),
three times a day. The control group was treated with Lan You Ting ointment, the
usage and other treatment methods were similar with the treatment group.

4. Standards for Evaluating the Curative Effects: The complete disappearance of
diaper dermatitis after treatment was regarded as marked effective; the improvement
of conditions (such as changing from severe degree to moderate degree, or from
moderate to light degree) was considered as effective. If the patient showed no
signs of improvement or even aggravation, the treatment was evaluated as ineffective.
In addition, the number of days needed for patients in the two groups to heal was also
observed, documented and processed with statistical approaches.

II. Result and Analysis

Data concerning the curative effects and healing time of the two groups are included
in the following tables.

Table 1: Comparison of Curative Effects between the Two Groups [Cases (%)]

<table>
<thead>
<tr>
<th></th>
<th>Cases</th>
<th>Marked Effective</th>
<th>Effective</th>
<th>Ineffective</th>
<th>Total Effective Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEBO Group</td>
<td>38</td>
<td>30 (78.95) △</td>
<td>6 (15.79)</td>
<td>2 (5.26)</td>
<td>36 (94.74)</td>
</tr>
<tr>
<td>Control Group</td>
<td>36</td>
<td>14 (38.89)</td>
<td>13 (36.11)</td>
<td>9 (25.00)</td>
<td>27 (75.00)</td>
</tr>
</tbody>
</table>

Note: △ Marked Effective rate comparison between the two groups, \(X^2 = 12.801\) (\(P < 0.01\))
Table 2: Comparison of Healing Time between the Two Groups

<table>
<thead>
<tr>
<th></th>
<th>3-5 days</th>
<th>5-10 days</th>
<th>&gt;10 days</th>
<th>Total</th>
<th>Cure Rate Within 10 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEBO Group</td>
<td>19 (50.00)△</td>
<td>16 (42.11)</td>
<td>3 (7.89)</td>
<td>38 (100.00)</td>
<td>35 (92.11) *</td>
</tr>
<tr>
<td>Control Group</td>
<td>4 (11.11)</td>
<td>21 (58.33)</td>
<td>11 (30.56)</td>
<td>36 (100.00)</td>
<td>251 (69.44)</td>
</tr>
</tbody>
</table>

Note: △Group comparison, X² = 13.052 (P < 0.01)
*Group comparison, X² = 6.189 (P < 0.05)

Table 1 shows that the marked effective rate in MEBO group is notably higher than that in the control group, and group comparison reveals very big differences, indicating that using EMBO to treat moderate and severe neonatal diaper dermatitis does improve effectiveness. Table 2 shows that the 3-5 days cure rate is higher in MEBO group than that in the control group and there are significant differences between the groups, indicating that using MEBO to treat moderate and severe neonatal diaper dermatitis can shorten the course of treatment. In terms of ten-day cure rate, MEBO group is also higher than the control group.

III. Discussion

MEBO is a simple traditional Chinese herbal ointment with a low melting point. Its ingredients include β-sitosterol and obakulactone with beeswax and sesame oil as its host substance. In clinical practice, besides extensive uses in curing burns, it is also widely reported and studied for treating wounds and surface ulcers. Some researchers believe that MEBO is able to cause wound bacteria to mutate, weakens its virulence and reduces the chance of wound infections. It also enhances local and systemic resistance to infections through regulating patient’s immunity [1]. MEBO also increases local blood circulations, accelerates the establishment of microcirculation, restore and promote the healing of wounds. Via liquefaction, it removes rotten tissues and helps grow new ones, and it creates a moist environment to facilitate the regeneration of skins [2].

Diaper dermatitis is a common neonatal disease, which was usually treated with firewood oil and Lan You Ting ointment in the past, but the results were not quite satisfactory. The authors of this paper have experienced a total effective rate of 94.74% with MEBO treatment, whose marked effective rate is significantly higher than the control group. It is also discovered that MEBO heals diaper dermatitis faster and its cure rate within three to five days is much higher than the control group. During the course of treatment, MEBO hasn’t produced any side effects or any adverse reactions. Therefore, the authors believe that MEBO is a viable and safe treatment for neonatal diaper dermatitis.
References
