The Application of MEBT in The Treatment of Male External Genital Organ Burn

Chen shixin, Zhou zhongquan, Sun dingnan
The First Hospital of Xiamen City

[Abstract] MEBT was an original therapeutic method for burns treatment in our country in late 1980s. This report introduced our experiences in treatment of 130 male patients with external genital burns from 1975 to 1993. Among them, 85 patients received traditional dry and heat therapy while 45 patients received moist exposure therapy. Significant differences existed between two methods in two periods.

[Key words] Male external genital burn; MEBT

Male external genital (penis, scrotum) burn was a kind of complicated urinary system injury. This report introduced our experiences in treating 130 male patients with external genital burn using two therapies in two different periods (1975-1985, 1990-1993) from 1975 to 1993.

Clinical Data

(1) General Information: Group [I] [DH-Dry and Heat Therapy]: From 1975~1985 our capital treated 944 cases of burn, with 566 male patients (60%). Among them, 85 patients (15%) had external genital burn, in which 29 patients (35%) aged from 1~3 years old, 21 patients (28%) aged from 15~40 years old and 80 patients (94%) had systemic burn.

Group [II] [MEBO]: From 1990~1993 our capital treated 329 cases of burn, with 227 male patients (69%). Among them, 45 patients (20%) had external genital burn, in which 17 patients (38%) aged from 1~3 years old, 13 patients (30%) aged from 15~40 years old and 40 patients (90%) had systemic burn.

(2) Treatment Methods: Fluid replenishment and antibiotics treatments were the same in group [I] and [II]. In wounds treatment, traditional dry and heat therapy plus external 1% SD-Ag were applied in group [I] while MEBO was applied in group [II].

(3) Results:

<table>
<thead>
<tr>
<th>Method</th>
<th>Number of cases</th>
<th>Number and percentage of <em>Bacillus aeruginosus</em> infection (%)</th>
<th>Number and percentage of scar (%)</th>
<th>Number and percentage of urethrostensitis (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I DH</td>
<td>80</td>
<td>60(75%)</td>
<td>10(12%)</td>
<td>4(5%)</td>
</tr>
<tr>
<td>II MEBO</td>
<td>45</td>
<td>2(4%)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Group I: Sixty patients (75%) had *Bacillus aeruginosus* infection, 10 patients (12%)
had flaky scar in their scrotums and 4 patients (5%) had urethrostenosis.

Group II: Two patients (4%) had *Bacillus aeruginosus* infection. No flaky scar or urethrostenosis occurred.

**Discussion**

(1) Male external genital consisted of penis and scrotum. It was easy for this part to get burned, because the penis and scrotum stood outside of the perineum area, especially in children since this part was always exposed. This area closed to anus there had many folds. It was not easy for the ventral and lateral parts of penis to be exposed, together with the depositing of secretion there, the possibility to getting infection by urine and feces became high. Burns in this area complicated with infection was usually the main reason to get systemic infection. Before 1990s, dry and heat therapy was always applied to treat the wounds. Debridement was carried out immediately after hospitalization. Sodium Chloride was applied to wash the wounds and then 1% bromogeramine was applied to sterilize. Later the blister was cut and the wound was dried up by dry gauze and heated by roasting lamp and hot blow. Finally the wound was covered by 1% silver sulfadiazine (1% SD-Ag). The above debridement was actually a kind of second physical stimulation. The application of 1% bromogeramine and 1% SD-Ag was a second chemical stimulation. These two injuries accumulated together, with the addition of drying and heating, it could exert a second thermal effect in the wounds. After these series of treatments, a blood vessel embolism net would occur in the wounds after 24-48 hours. When MEBT was applied, it was not necessary to perform the above debridement after burned. MEBO was directly applied and the rotten skin was gradually absorbed by scrubbing of toilet paper. Maintain MEBO was always applied in the wounds until it healed. MEBO could effectively isolate the wounds from contacting with urine and feces. The curing time was shorten by the application of MEBT. In this group, only 2 patients had *Bacillus aeruginosus* infection and no patients had scars left.

(2) MEBT could prevent moist evaporation and keep the wounds wet. MEBO had a low melting point, strong lipotropism and biocompatibility with no irritation and toxicity. The affinity of ground substances in MEBO could reduce the contact of wounds with the outside, allowing zero clearance between tissues and these ground substances, thus the wounds were repaired by liquefaction from outside to inside. Many “parabiotic” tissues existed in the wounds because the burned area and depth were different. These “parabiotic” tissues could be brought maximally to their lives through rancidification, saponification, and enzymolysis to separate the necrotic parts in tissues, to decrust and resolve crust, and thus the cells that close to death could be reversed to their lives. The pain-relieving function was produced by MEBT’s effect of reducing the sensitivity of peripheral nerve, blocking up the path of air by which to damage the wounds and relaxing musculi arrectores pilorum. Its antiseptic function was via the following effects: well drainage, removing putrefaction to promote tissue regeneration, reducing bacterial solubility, neutralizing the toxins produced by bacterial in necrotic tissues as well as MEBO’s own anti-toxicity.