MEBO Patch for Repairing Perforation of Tympanic Membrane

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【Abstract】Objective: To explore the method for repairing tympanic membrane perforation due to chronic suppurative tympanitis. Method: 50% trichloroacetic acid solution was used to ignite the margin of the old tympanic perforation, then MEBO patch was applied on the tympanic membrane. MEBO was applied once every 5 days. The total treating course was 20 to 30 days. Result: For small perforation, the curative rate was 92.6% (25/27); for middle sized perforation, the curative rate was 72.2% (16/22) and for large perforation, none cured (0/2). Conclusion: MEBO patch is suitable for repairing small and middle sized tympanic membrane perforation.

【Key words】MEBO Sticking Pieces; Perforation of Tympanic Membrane.

Although the perforation of tympanic membrane caused by chronic otitis media suppurativa is one of clinical common diseases, it is difficult to natural cure. It not only harms the patient’s auditory but also always leads to recurrence of tympanitis. We had treated it with the therapy of MEBO sticking pieces to improve the healing of tympanic membrane since 1993 to 1997. The curative effects are satisfying. The treatment conditions of 43 cases (51 ears) in our hospital are summed as follows.

I Clinic Data

All the cases were ambulatory (simple) chronic otitis media suppurativa. Among them, 31 cases (36 ears) were male and 12 cases (15 ears) were female. They were 15~52 year-old and averagely 29.3 year-old. The longest case history was 31 years and the shortest was 6 months. The degree of perforation: 23 cases (27 ears) were small-sized perforations (diameter < 3mm), 18 cases (22 ears) were middle-sized perforations (diameter 3~5mm) and 2 cases (2 ears) were large-sized perforations (diameter > 5mm). Through examination, the auditory tubes of all cases were unobstructed and all the ears keep dry over 1 year.

II Material & Therapy

1 Material making: Sheared sterilized gauze to round pieces which diameters were larger 2mm than those of the perforation of tympanic membrane according to the perforation. Then, uniformly applied MEBO onto the gauze (sticking pieces) until the sticking pieces were moist but have no superfluous ointment.

2 The Therapeutic Method: Disinfected the external auditory canals with 70% alcohol, used extremely thin cotton sticks or lunate pliers to apply cotton threads with 50% trichloroacetic acid and burn the edge around perforation of tympanic membrane with medical cotton threads till emerge 0.5mm white edge. Then, gently and flatly applied MEBO sticking pieces with lunate pliers onto tympanic membrane to completely cover the perforation. During application of sticking
pieces, prevented upper respiratory tract infection, strictly prohibit nose and
let water into ears. Every 5 days, applied a little MEBO onto the pieces to keep
moist with small cotton sticks. For small-sized perforations, took out the sticking
pieces after 20 days, and for middle- and large- sized perforations, took out after
1 month.

III Result:

Among the 43 cases (51 ears), 25 ears were small-sized perforations and its healing
rate was 92.6%; 16 ears were middle-sized perforations and its healing rate was
72.2%; 2 ears were large-sized perforations and none of them healed.
Consequently, the total healing rate was 80.4%. The auditory examination of cured
41 ears showed that their aerotympanic conduction were above the speech frequency
of 250, 500, 1000 and 2000Hz and developed 10dB than that before treatment or
had completely recovered.

VI Discussion

MEBO is a traditional Chinese chemical ointment with mainly elements of Cortex
Phellodendri, beeswax, sesame oil and etc.. Besides, traditional Chinese and
Western pharmacology and histological observation have proved that MEBO not only
possesses detoxifying and myogenic functions, but also can improve the
regeneration of wounds and granulation tissues, accelerate the blood circulation of
wounds to guarantee sufficient provision of oxygen and nutrient, develop local
metabolism and epithelial healing. Burn the edge around perforation of tympanic
membrane with 50% trichloroacetic acid to form artificial wounds. This therapy
sufficiently utilize the promoting function for epithelial growth of MEBO and the
“bridge” function of sticking pieces, in order to make neoformative pellicle layer of
tympanic membrane concentrically grow along the sticking pieces and regenerative
epithelial tissues cover along mucous layer to enhance the healing of perforated
tympanic membrane. Besides, MEBO itself has antisepsis and antiphlogistic
functions, cause bacterial to mutate and reduce the toxicity and invasiveness of
pathogenic bacteria. Consequently, the cases in this group were not treated with
antibiotic but none was infected. The treatment result showed that the effect of
MEBO in treating small-sized perforations was significantly superior to that in treating
middle and large-sized perforations. Namely, the smaller perforation of tympanic
membrane were, the easier the wounds healed. This therapy is suitable to be used
among basal hospitals for its convenience and economy. Furthermore, its materials
are also easy to get. This study finds that this therapy cannot achieve ideal curative
effects, so it is not suitable to treat perforations of tympanic membrane > 5mm. In
this study, during the all treatment course, insist to use the same sticking piece and
apply drug every 5 days. It is speculated that if perforated tympanic membrane
tissues are not berepaired, it will help the reparation of perforated tympanic
membrane by changing sticking pieces and adding the times of dressing change
during the treatment course.
References

[1] Xing Dongming, Experimental Study on Improving Functions of Healing Skin
Wounds and Anti-infection. *The Chinese Journal of Burn Wounds & Surface Ulcers