- traditional methods and dynamic investigation. Occup Ther Pract, 1989, 1.36-57
- 2 Toglia JP. A dynamic interactional approach to cognitive rehabilitation. In: Katz N, eds. Cognitive rehabilitation: models for intervention in occupational therapy. Massachusetts: Butterworth-Heinemann, 1992. 104-143.
- 3 Abreu A. The quadraphonic approach; management of cognitive and postural dysfunction. New York; Therapeutic Service Systems, 1990. 243-258
- 4 Abreu BC, Hinosjosa J. The process approach for cognitive-perceptual and postural control dysfunction for adults with brain injuries. In: Katz N, eds. Cognitive rehabilitation: models for intervention in occupational therapy. Massachusetts: Butterworth-Heinemann, 1992. 167-194.
- 5 Averbuch S, Katz N. Assessment of perceptual cognitive performance: comparison of psychiatric and brain injured adult patients. Occup Ther Ment Health, 1988, 8:57-71.
- 6 Averbuch S, Katz N. Cognitive rehabilitation; a retraining approach for brain injured adults. In; Katz N, eds. Cognitive rehabilitation; models for intervention in occupational therapy. Massachusetts; Butterworth-Heinemann, 1992. 219-239.
- 7 Giles GM, Clark-Wilson J. Occupational therapy for the brain-injured adult; a neurofunctional approach. London; Chapman and Hall, 1992. 137-158.

- 8 Giles GM. A neurofunctional approach to rehabilitation following severe brain injury. In: Katz N, eds. Cognitive rehabilitation: models for intervention in occupational therapy. Massachusetts: Butterworth-Heinemann, 1992, 195-218.
- 9 Verhaeghen P, Marcoen A, Goossens L. Improving memory performance in the aged through mnemonic training; a meta-analytic study. Psychol Aging, 1992, 7;242-251.
- 10 林溢新, 谭声辉, 文伟光, 等. Virtual reality environment for community skills training. Brain Inj, 2003, 17:151-152.
- 11 文伟光,谭声辉. An explorative investigation into the usability and usefulness of training people with an expert system. Brain Inj, 2003, 17: 138.
- 12 文伟光, 谭声辉, 许云影. Learning to live independently with an expert system in memory rehabilitation. NeuroRehabilitation, 2003, 18:21-29.
- 13 谭声辉. Efficacy outcome and sex difference in learning hypermedia programming skills. Percept Mot Skills, 1998, 87:855-858.
- 14 谭声辉,文伟光,许云影,等. Evaluating the efficacy of tele-cognitive rehabilitation for functional performance in adults following brain injury. Occup Ther Int, 2003, 10:20-38.

(收稿日期:2003-06-29) (本文编辑:吴 倩)

.短篇论著.

# 微波治疗颞下颌关节病

## 李丽 高洪志 唐雄飞

1998年以来我院采用微波治疗颞下颌关节病 108 例,疗效满意,报道如下。

## 一、资料与方法

经确诊颞下颌关节病患者 108 例,其中男 72 例,女 36 例;年龄 19~61 岁,平均 38 岁;病程 3 d~1 个月。所有患者均为单侧发病,临床表现为:下颌运动受限;关节和周围肌肉疼痛;关节运动时有杂音和弹响。108 例患者分为 2 组,每组各 54 例,症状和体征等差异均无显著性。

治疗组采用日本产 ME-7200 型微波治疗仪,频率为2 450 MHz,波长12.24 cm,输出功率0~200 W连续可调,圆形辐射器直径17 cm,病侧颞下颌关节照射,距离体表5~100 cm,微热量(30~60 W),每日1次,按照发病时间长短每次治疗10~15 min,10次为1个疗程(为防止医源性白内障,治疗时患者佩带护目镜)。对照组采用国产五官短波治疗仪,频率43 MHz,波长7 m,输出功率50 W,对置两侧颞下颌关节,间隙0.5~1.0 cm,微热量,每日1次,每次10~15 min,10~20次为1个疗程。

疗效标准:治愈——关节功能恢复正常,症状消失;显效——关节功能明显改善,症状明显减轻;好转——关节功能 有所改善,症状有所减轻;无效——症状、体征无好转。

## 二、结果

治疗组治疗  $3 \sim 10$  次,平均治疗 6 次,治愈 40 例,显效 12 例,好转 2 例,治愈率 74.1%;对照组治疗  $5 \sim 20$  次,平均治疗 14 次,治愈 25 例,显效 10 例,好转 18 例,无效 1 例,治愈率 46.3%。经 Ridit 分析,P < 0.01,两组差异有非常显著性意义,治疗组疗效显著优于对照组。

#### 三、讨论

微波系高频电磁波,作用于机体时产热局限,肌肉、脂肪产热相近,故热分布均匀。其热作用可降低 γ 纤维的兴奋性,通过反射减弱传向普通肌纤维的传出冲动,降低肌张力,同时还能改变纤维结缔组织的物理性质,减弱其张力,增加其弹性。适当的热可使肌腱、韧带、关节囊等组织的延展性增大 5 ~ 10 倍<sup>[1]</sup>。微波所产生的生物热效应,可使局部血管扩张,改变病变组织局部血液循环和代谢,促进组织的再生和修复,故有良好的消炎、止痛的作用。微波治疗颞下颌关节病,操作简便,治疗时间短,疗效显著,值得推广。

### 参考文献

1 缪鸿石,编著. 电疗与光疗. 第 2 版. 上海:上海科技出版社,1990. 234-288.

(收稿日期:2003-03-25) (本文编辑:阮仕衡)