World Journal of Acupuncture-Moxibustion (WJAM)
Vol. 25, No.4, 30th Dec. 2015
ELSEVIER

Clinical Research

Treatment of 85 patients with dysphagia after stroke with deep needling at local glossopharyngeum

舌咽局部深刺治疗中风后吞咽障碍85例

MENG Ying-chun (孟迎春), WANG Hai-quan (王海泉)

Acupuncture and Rehabilitation Department of Shandong Provincial Hospital Affiliated to Shandong University, Jinan 250021, Shandong Province, China (山东大学附属省立医院针灸理疗康复科，济南 250021，中国)

ARTICLE INFO

MENG Ying-chun (1977-), female, attending physician, medical doctor (MD). Research field: acupuncture and moxibustion therapy on nervous system diseases and sub-health status.
E-mail:myc9866@163.com

Accepted on May 4, 2015

ABSTRACT

Objective To observe the clinical efficacy of deep needling at local glossopharyngeum in treatment of dysphagia after stroke. **Methods** Deep needling at local glossopharyngeum was applied in 85 patients with dysphagia after stroke. Firstly, quick prick was conducted on lingual surface (mainly at the side of paralysis lingualis), Jīnjīn (金津 EX-HN 12) and Yùyè (玉液 EX-HN 13) under the tongue; secondly, filiform needle with the length of 75 mm was used to perform quick prick at posterior wall of pharynx at the affected side about three or four times, and then the needle was removed rapidly. Filiform needle with the length of 75 mm was inserted perpendicularly at Liánquán (廉泉 CV 23) towards root of tongue; after *deqi*, the needle was pushed towards root of tongue in the depth of 60–70 mm, and the needle was retained for 30 min. Meanwhile, the patient was asked to swallow, and the feeling of abnormal deglutition without pain was considered as most appropriate. During needle retention, twirling for reinforcement was applied for two times. The manipulation was conducted once daily, and six days was considered as one course of treatment. Between two courses, one day was free of treatment; and there were four courses in total. Kubota's drinking water test evaluation scale was applied to assess the efficacy after the treatment for two weeks and four weeks. **Results** The score of Kubota's drinking water test at the early stage of treatment was 5.08 ± 2.28, the score of evaluation of treatment with deep needling at local glossopharyngeum after treatment for two weeks was 4.56 ± 2.32, and the total effective rate was 89.4%; the score of evaluation after treatment for four weeks was 2.80 ± 2.12, and the total effective rate was 95.3%. Compare before the treatment, the score of Kubota's drinking water test was reduced after treatment for two and four weeks ($P<0.05$, $P<0.01$). **Conclusion** Deep needling at local glossopharyngeum in treatment of dysphagia after stroke has good effect.

KEY WORDS: dysphagia; stroke; acupuncture therapy; the depth of acupuncture

Dysphagia after stroke, a common symptom after apoplexy, is induced by false bulbar paralysis due to bulbar paralysis or bilateral tractus corticobulbaris injury caused by injury of nuclei of cranial nerves relating to deglutition in brainstem. It is confirmed by numerous clinical practices that acupuncture is a significant and effective method for treatment of dysphagia after stroke. In this study, 85 patients with dysphagia after stroke were treated with deep needling at local glossopharyngeum. The report is shown as follows.

CLINICAL DATA

General data

Eighty-five patients were selected from inpatient department of Acupuncture and Rehabilitation Department of Shandong Provincial Hospital Affiliated to Shandong University from May, 2013 to July, 2014. There were 59 males and 26 females, aging from 38 to 74 years old with the average of (59.2±10.2) years old. The course of disease was from 5 to 45 days, and the average course was (24.5±8.1) days. The initial score of function of deglutition was 5.08±2.28.

Diagnostic criteria

The diagnostic criteria of cerebrovascular disease were established by reference to *Diagnostic Points of Various Cerebrovascular Diseases* [1] revised on the 3rd academic conference of the Fourth National Cerebrovascular Disease Conference held by Chinese Medical Association in 1995. False bulbar paralysis was diagnosed by reference to *Practical Neurology* [2]. ① Dysphonia and language disorders, bradymasesis and dysphagia, and drinking water choked cough; ② dyskinesia of soft palate, throat muscle, lingualis, masseter muscle or facial muscle, without amyotrophia and fasciculation of lingualis; ③ pathologically positive brainstem reflexes: jaw reflex, and sucking reflex, etc.; ④ pharyngeal reflex exists, but soft palate reflex disappears or is extremely weak; ⑤ pyramidal sign (unilateral or bilateral acroparalysis), or affective disorders (apathetic facial expressions, forced crying and forced laughing); ⑥ attack or repeated attack of cerebrovascular disease (stroke).

Inclusive criteria

The patients conforming to the abovementioned diagnostic criteria were included, with age from 35 to 75 years old, and course of disease within 6 months.

Exclusive criteria

① The patients with dysphagia induced by local lesions in mouth cavity, throat and esophagus, but suffering from primary nervous system diseases or other systemic diseases; ② combined organ failures of brain, heart, lung, liver or kidney, or severe primary diseases of hematopoietic system or endocrine system; ③ combined dementia, Parkinson's disease, or unconsciousness, mental disorders, and the patients cannot coordinate with examination and treatment.

Drop-out criteria

① The patients suffered from other diseases during the study, which impacted the efficacy of the treatment; ② the patients underwent severe adverse events; the patients with poor compliance who cannot conform to established scheme or who received other treatment; ③ the patients with incomplete data.

METHODS

Basic treatment

Eighty-five patients were all inpatients who have received conventional western medicine treatment for cerebral infarction, including symptomatic treatments of protecting brain cells, improving cerebral circulation, anti-platelet aggregation, nurturing nerve, depressurization, lipid regulation and reducing blood glucose, etc. The patients with concomitant disease of hemiplegia were given conventional acupuncture treatment at points on limbs (points at the affected side), including Jiānyú (肩髃 LI 15), Bìnào (臂臑 LI 14), Qūchí (曲池 LI 11), Shǒusānlǐ (手三里 LI 10), Wàiguān (外关 TE 5) and Hégǔ (合谷 LI 4) on upper limbs, and Fútù (伏兔 ST 32), Xuèhǎi (血海 SP 10), Zúsānlǐ (足三里 ST 36), Yánglíngquán (阳陵泉 GB 34), Fēnglóng (丰隆 ST 40), Sānyīnjiāo (三阴交 SP 6) and Tàichōng (太冲 LR 3) on lower limbs.

Deep needling at local glossopharyngeum (Figure 1)

Figure 1 Deep needling at local glossopharyngeum

Point selection: lingual surface (mainly at the side of paralysis lingualis), posterior wall of pharynx at the affected side, Jīnjīn (金津 EX-HN 12), Yùyè (玉液 EX-HN 13) and Liánquán (廉泉 CV 23) under the tongue. Manipulation: the patient was asked in supine position, and *Hwato* filiform needles with diameter of 0.3 mm and length of 40–75 mm were applied. Firstly, rapid pricking was conducted on lingual surface (front and middle parts of corpus linguae and margins of both sides) for about 2 s, then the needle was removed, and the patient was asked to resist the palate by tongue; secondly, rapid pricking was conducted at EX-HN 12 and EX-HN 13, and filiform needle with the length of 75 mm was used to perform pricking at posterior wall of pharynx at the affected side for about three or four times. filiform needle with the length of 75 mm was inserted perpendicularly at CV 23 towards