Clinical Effects of Acupuncture for Diabetic Peripheral Neuropathy

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Objective: To observe the clinical effects of acupuncture for diabetic peripheral neuropathy. Methods: Totally 65 patients were randomly divided into a treatment group of 32 cases and a control group of 33 cases. On the basis of conventional treatment of diabetes, acupuncture was used in the treatment group, and inositol was orally administered in the control group. During a 3-month treatment, changes in the symptoms were observed. Results: In the treatment group, 16 cases were markedly relieved, 12 cases improved, and 4 cases failed, with a total effective rate of 87.5%. In the control group, 7 cases were markedly relieved, 14 cases improved and 12 cases failed, with a total effective rate of 63.6%. There was a significant difference in the total effective rate between the 2 groups (P<0.05). Conclusion: Acupuncture may show good effects for diabetic peripheral neuropathy.

Key words: diabetes mellitus; peripheral neuropathy; acupuncture

From June 2006 to June 2007, the authors used acupuncture at the main points of Ganshu (BL 18), Pishu (BL 20), Shenshu (BL 23), Yishu, Feishu (BL 58) and Zusanli (ST 36) to treat 32 cases of diabetic peripheral neuropathy. The report is as follows.

CLINICAL MATERIALS

All the 65 patients in this series were from the Affiliated Hospital of Liaoning University of Traditional Chinese Medicine, and they conformed to the diagnostic criteria stipulated by WHO in 1999: FBG (fast blood glucose) ≥7.0 mmol/L, in the OGTT test 2 h BG ≥11.1 mmol/L or the random BG ≥11.1 mmol/L (all taking the venous blood). The symptoms and signs were sustained pain and/or abnormal sensation in the four limbs (at least in the lower limbs), weakened reflex in one ankle or two, weakened sensation of vibration (sensation of vibration in inner ankle was weaker than that in entocnemial condyle), and decreased nervous conductive velocity (NCV) on the main side in electroneuro-physiological examination. The patients with peripheral neuropathy caused by other factors (such as heredity, alcoholism, uremia, infection, malnutrition, drug intoxication and metal intoxication) were excluded. 1 The patients were randomly divided into two groups. In the treatment group of 32 cases, there were 13 males and 19 females, aged 36–68 years (mean 52), with an illness course of 1–5 years. In the control group of 33 cases, there were 15 males and 18 females, aged 40–66 years (mean 53), with an illness course of 0.5–5 years.

METHODS

After basic treatment for both the two groups, acupuncture was used in the treatment group, and inositol was orally administered in the control group.

The Basic Treatment

All the patients were conventionally treated, with FBG below 7.0 mmol/L and 2 h BG below 11.1 mmol/L. For those diabetics complicated with hypertension and hyperlipemia, their blood pressure and blood lipid were controlled to the normal range. And the diet was rationally controlled.

For the Treatment Group

The main points selected were Ganshu (BL 18), Pishu (BL 20), Shenshu (BL 23), Yishu, Feishu (BL 58), Zusanli (ST 36), Sanyinjiao (SP 6), Taibai (SP 3), Zutonggu, Qihai (CV 6), Guanyuan (CV 4), Fenglong
(ST 40) and Yanglingquan (GB 34). The auxiliary points used were Jianyu (LI 15), Quchi (LI 11), Shousanli (LI 10), Hegu (LI 4), Biguan (ST 31), Futu (ST 32), Liangqiu (ST 34), Xiangu (ST 43) and Neiting (ST 44). Xuehai (SP 10) and Geshu (BL 17) were added for blood stasis; Yinlingquan (SP 9) and Diji (SP 8) were added for phlegm; and Bafeng (EX-LE10) and Baxie (EX-UE9) were added for severe numbness of the hands and feet.

The No.30 1–1.5 cun filiform needles were used for acupuncture with the uniform reinforcing-reducing method. After the needles had been inserted into the points, evenly lifting, thrusting and twirling was performed until the patients felt needling sensation. Then, the needles were retained for 25 minutes, and manipulated twice. The treatment was given once a day, with 14 sessions as one course of treatment, for 5 consecutive courses with a 4-day interval between courses.

For the Control Group
Inositol was orally taken 2 g a day in 3 times. Three months later, the clinical effects were evaluated for both the two groups.

Criteria for Therapeutic Effects
Markedly relieved: the subjective symptoms disappeared, with no abnormalities found in examination of the nervous system. Improved: the subjective symptoms were alleviated or the affected area was reduced, with improvement shown by the nervous system examination. Failed: the subjective symptoms were not improved or even aggravated.

RESULTS
In the treatment group of 32 cases, 16 cases were markedly relieved, 12 cases improved, and 4 cases failed, with a total effective rate of 87.5%. In the control group of 33 cases, 7 cases were markedly relieved, 14 cases improved, and 12 cases failed, with a total effective rate of 63.6%. The χ² test showed a significant difference in clinical effects between the two groups.

DISCUSSION
Diabetic peripheral neuropathy belongs to the TCM category of diabetes complicated with arthralgia, which differs from the arthralgia caused by wind, cold and dampness. TCM holds that diabetes with a lingering course may deplete qi and yin, with an obstructed circulation of qi and blood, and blocking of the channels and collaterals. It is a syndrome of deficiency mingled with excess. The disease should be treated by reinforcing qi and yin, promoting blood circulation, strengthening the spleen, resolving phlegm, and nourishing the liver and kidney, with the stress put on treating the peripheral neuropathy. The back-shu points can regulate the functions of zang-fu organs, coordinate yin and yang, and strengthen the body resistance; especially Yishu point can effectively regulate endocrine function of the pancreatic islets. Fenglong can strengthen the spleen and remove dampness. Zusani and Sanyinjiao used together can nourish the liver, strengthen the spleen and reinforce the kidney. Taibai and Zutonggu (足痛谷) can clear yin and yang channels. Yanglingquan can clear away heat from the yang channels. Guanyuan and Qihai can nourish the kidney-qi. The auxiliary points selected according to the symptoms can clear the channels and collaterals and circulation of qi and blood.

The modern medical researches have demonstrated that the effects of acupuncture in clearing the channels and promoting blood circulation can help the β cell receptors of insulin to utilize and transform glucose so as to control blood glucose, promote microcirculation, enhance the concentration of blood oxygen around the affected area, promote functional recovery of the affected nerves, and excite the vagus nerve to regulate the vegetative nerve, correct the endocrine dysfunction and restore the normal function.

What should be mentioned is that special attention should be paid to sterilize the skin and needles so as to prevent the secondary pathological changes because the disease is often complicated by skin infection.

REFERENCES

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