Observations on Treatment of Piriformis Injury Syndrome by a Technique of Green Tortoise Exploring Point

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【摘要】目的:观察运用苍龟探穴手法治疗梨状肌损伤综合征的效果。方法:将90例患者随机分为苍龟探穴组30例，针刺组30例及水针组30例进行临床观察。结果:三组治疗后症状均有改善，苍龟探穴组总有效率为100.0%；针刺组总有效率为76.7%；水针组总有效率为83.3%。三组之间比较差异有统计学意义(P<0.01, P<0.05)。结论:运用苍龟探穴手法治疗梨状肌损伤综合征的疗效优于普通针刺法及穴位注射法。

【关键词】梨状肌损伤综合征；针灸疗法；刺法；苍龟探穴

【Abstract】Objective: To investigate the efficacy of the green tortoise exploring point technique for treating piriformis syndrome. Methods: Ninety patients were randomly allocated to a green tortoise exploring point treatment group of 30 cases, an acupuncture control group of 30 cases and a hydro-acupuncture control group of 30 cases for clinical observation. Results: The symptoms improved after treatment in all the three groups. The total efficacy rate was 100.0% in the treatment group, 76.7% in the acupuncture group and 83.3% in the hydro-acupuncture group. There were statistically significant differences between the three groups (P<0.01, P<0.05). Conclusion: The technique of green tortoise exploring point is better than conventional acupuncture and hydro-acupuncture in treating piriformis injury syndrome.

【Key Words】Piriformis Injury Syndrome; Acupuncture-Moxibustion Therapy; Needling Method; Green Tortoise Exploring Point

【CLC Number】R246.2

【Document Code】A

The piriformis injury syndrome is a commonly and frequently encountered clinical condition. The authors treated 90 cases of piriformis injury syndrome since January 2003. The results are reported as follows.

1 Clinical Data

1.1 General data

All ninety cases from the outpatient department of acupuncture were randomized into the treatment group, acupuncture group and hydro-acupuncture group, 30 cases in each group. Among 30 cases in the treatment group, male cases: 21; female cases: 9; the youngest: 20 years old; the oldest: 69 years old; the shortest duration: 7 days; the longest duration: 15 years; the left-sided condition: 18 cases; the right-sided condition: 11 cases; and both sides: 1 case. Among the acupuncture group, male cases: 19; females cases: 11; the youngest: 21 years old; the oldest: 65 years old; the shortest duration: 2 weeks; the longest duration: 17 years; the left-sided condition: 16 cases; and the right-sided condition: 14 cases; among the 30 cases in hydro-acupuncture group, male cases: 17 cases; female cases: 13 cases; the youngest: 20 years old; the oldest: 70 years old; the shortest duration: 1 week; the longest duration: 16 years; the left-sided condition: 11 cases and the right-sided condition: 19 cases. The cases in the three groups have no statistical difference in age, gender and disease course (P>0.05).

1.2 Diagnostic criteria

This is on the basis of diagnostic keys for piriformis injury syndrome in the textbook of TCM universities or colleges, namely, TCM Tendon Traumatology[1]. Pain in the buttock and radiating pain along the course of the
sciatic nerve in the lower limb that can aggravate upon fatigue or external contraction of wind, cold and dampness; tenderness in piriformis and radiating pain, palpable prominence of local cords with dull and thick sensation; and positive result of piriformis tension test.

2 Treatment Methods

2.1 The treatment group

Points: Ashi point and Yanglingquan (GB 34).

Operation: The patients were asked to take side lying position with flexion of hip and knee joints and the affected limb on the top. One filiform needle sized 0.40 mm×75 mm was used to puncture the Ashi point (the projection of piriformis on the muscle surface) perpendicularly, followed by small-amplitude rotation to the depth of 2.5-2.8 cun as well as 2-3 min even reinforcing-reducing manipulation to produce intensive soreness, numbness and distension referring to the lower limb. Then the needles were gradually withdrawn to superficial layer and punctured toward three layers of heaven-earth-man after adjusting the needle tip direction. In summary, this method include slow insertion with simultaneous rotation, gradual withdrawal to superficial layer upon local soreness, numbness and distension, puncturing toward three directions (inferior, left and right) by turns after adjusting the needle tip direction, then withdraw the needle to superficial layer, after that re-puncture slowly and perpendicularly into the man layer and apply 2-3 min even reinforcing-reducing manipulation. The point Yanglingquan (GB 34) was punctured with filiform needle sized 0.40 mm×75 mm with even reinforcing-reducing manipulation, allowing the soreness, numbness and distension radiating to the lower leg. The needles were retained for 30 min; the manipulation was done once every 10 min. The treatment was done once every day and 10 times make up one treatment course. There was a 7-day interval between the two courses. The cases were treated for 4 weeks.

2.2 The acupuncture group

Points: Zhibian (BL 54), Ashi point (the projection of piriformis on muscle surface), Yanglingquan (GB 34), Weizhong (BL 40) and Yinmen (BL 37).

Operation: The patients were asked to take prone position. After routine sterilization, the filiform needles sized in 0.40 mm×40-75 mm were used to puncture 2.5-3 cun for Zhibian (BL 54), Ashi point, Yanglingquan (GB 34) and Yinmen (BL 37) and 0.5 cun for Weizhong (BL 40), followed by reducing manipulation through lifting, thrusting and rotating to allow the soreness, numbness and distension radiating to the lower limb. The needles were retained for 30 min; the manipulation was done once every 10 min. The treatment was done once every day and 10 times make up one treatment course. There was a 7-day interval between the two courses. The cases were treated for 4 weeks.

2.3 The hydro-acupuncture group

After routine sterilization, the mixture of 40 mg of triamcinolone acetonide injection, 5 mL of 2% lidocaine injection, 0.5 mg of vitamin B12 injection and 100 mg of vitamin B1 injection 10 mL was injected into the Ashi point (the projection of piriformis on muscle surface) with 10 mL syringe and 3-cun needle tip No 7. The injection was done every 7 days; twice a course and the cases were treated for 4 courses.

3 Treatment Results

3.1 Therapeutic efficacy criteria

Recovery: The pain in the buttock or referred pain in the lower limb disappeared; negative result of the piriformis tension test, functional recovery and the six-month follow-up did not show any relapse.

Improvement: The pain in the buttock or referred pain in the lower limb alleviated, weak positive result of piriformis tension test and certain functional improvement.

Failure: The symptoms remained unchanged after 3 courses.

3.2 Treatment result

Seeing from the table 1, the recovery rate and the effective rate of the treatment group were 93.3% and 100.0% respectively, that in the acupuncture group were 46.7% and 76.6% respectively and that in the hydro-acupuncture therapy were 40.0% and 83.3% respectively. There was statistical difference among three groups in terms of the effective rate ($P<0.01$ or $P<0.05$). This indicates that the treatment effect in the treatment group was better than the acupuncture group and hydro-acupuncture group.

4 Discussion

The piriformis injury syndrome is a condition in which the sciatic nerve is compressed by the piriformis