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Effect of Acupuncture and Moxibustion on Functional Recovery after Knee Arthroplasty

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Abstract. To investigate the effect of acupuncture and moxibustion on functional recovery after knee arthroplasty. One hundred cases of knee arthroplasty were performed in the PLA's 371th Hospital of the PLA from February 1, 2017 to March 22, 2018. Random divided into observation group and control group, each group of 50 cases, observation group on the basis of postoperative routine nursing acupuncture treatment; In the control group of 50 patients, routine postoperative care was given to evaluate the knee function of the two groups of patients and the values of aLDFA and aMFTA in the direction of the distal femoral axis. HSS knee function score was significantly improved in two groups ($P < 0.05$), The HSS knee function score was better than that of the control group ($P < 0.05$). The observation group aLDFA and aMFTA were superior to the control group ($P < 0.05$). The difference is statistically significant. Acupuncture and moxibustion can promote the recovery of knee joint after replacement, which is beneficial to the rehabilitation of patients.

INTRODUCTION

Total knee arthroplasty (TKA) is a procedure in which a metal prosthesis is used to replace the tibia and the femoral articular surface of the knee and to place a pillow pad between the two metals. Serious impact on the quality of life and ineffective conservative treatment, at the same time X-ray indicated that the knee joint has obvious stenosis, clinical choice of TKA surgery for treatment, this is also the best treatment of osteoarthritis [1]. Early postoperative functional exercise with severe pain [2] will have a certain impact on postoperative functional recovery. In this study, we chose the combination of acupuncture and moxibustion after TKA operation, and observed the effect of acupuncture and moxibustion on TKA operation. The role of functional recovery is reported as follows.

CLINICAL DATA

General Information

A total of 100 patients undergoing unilateral total knee arthroplasty from February 1, 2017 to March 22, 2018 in the military Joint Trauma Center of the 371st PLA Hospital were included in the criteria: patients with difficulty in walking. Severe pain, varus and flexion deformities were obvious. All patients were diagnosed before operation and had indications of total knee arthroplasty. Before participating in this study, all patients had no other treatment than routine treatment within one month. And agreed to participate in the study of patients [3]. Exclusion criteria: the patients who participated in the study could not have infectious diseases, liver and kidney dysfunction, pregnancy or lactation. Women, drug allergy and severe mental illness, mental illness [4]. The subjects were divided into observation group (n = 50) and control group (n = 50). There were 22 males and 28 females in the observation group

with an average age of 63.6 years, while in the control group, there were 27 males and 23 females with an average age of 62.5 years.

METHODS AND RESULTS

Therapeutic Method

100 patients were treated with unilateral total knee arthroplasty under epidural anesthesia. The observation group was treated with acupuncture and moxibustion on the basis of routine nursing after operation. With the points of Liangqiu, Yanglingquan, Yinlingquan, Xuehai [5] as the matching points, according to the individual situation of the patients, acupuncture at Zusanli and Xuanzhong points), acupuncture with 1-3 inches of the above acupoints is used to acupuncture the above-mentioned acupoints, and after acupuncture to get qi, According to the method of leveling tonifying and reducing the needle, it is better for the patient to feel slight acid-swelling in the needle eye of the knee joint, and then connect the electroacupuncture therapy instrument, according to the patient's tolerance. Degree, select the appropriate current intensity, 20 minutes each time, once a day, 10 days as a course of treatment, 3-5 days before the next course of treatment, the second day after the operation with acupuncture method, generally need 2-3 courses of treatment, The control group was given routine nursing care after operation.

Observation Indicators

Three months after operation, the knee joint function of the two groups was evaluated by HSS knee scoring standard, and the aLDFA and aMFTA were measured simultaneously.

Statistical Methods

Two groups of data were analyzed and processed by SPSS 19.0 software. The counting data were expressed as (mean \pm standard deviation). T test was used for the comparison between the two groups ($P < 0.05$, $P < 0.05$).

Results

The HSS knee joint function score of the two groups was significantly improved compared with the preoperative ($P < 0.05$). The HSS knee joint function score of the observation group was better than that of the control group ($P < 0.05$). The aLDFA and aMFTA of the observation group were better than that of the control group ($P < 0.05$), and the difference was statistically significant, as shown in Table 1 and 2.

Table 1. Comparison of HSS knee function score between two groups($\bar{x} \pm s$)

Group	Number of examples	Preoperative	Postoperative	t	p
observation group	50	41.62 \pm 1.26	98.92 \pm 0.38	4.22	<0.05
control group	50	40.54 \pm 0.62	83.88 \pm 1.31	3.86	<0.05
t		0.38	2.98		
p		>0.05	<0.05		

Table 2. Comparison of aLDFA and aMFTA between the two groups($\bar{x} \pm s$)

Group	Number of examples	aLDFA	aMFTA
observation group	50	82.86 \pm 1.35	0.95 \pm 0.68
control group	50	80.14 \pm 1.42	2.05 \pm 0.52
t		6.78	3.56
p		<0.05	<0.05

DISCUSSION

Total knee arthroplasty (TKA) is a kind of prosthesis made of metal material to replace the osteogenic surface of knee joint. It is the most effective method to treat knee joint injury at present, and has been widely used in the late treatment of knee joint disease. Due to the large trauma of total knee arthroplasty, extensive soft tissue release during the operation, massive bleeding on the osteotomy surface and hyperfibrinolysis caused by the use of tourniquet, it will lead to a large amount of dominant and recessive blood loss during perioperative period [6-8]. Even serious complications such as venous thrombosis and infection [9-10] cause postoperative knee pain, swelling, difficulty in walking, and recovery of knee function. A fixed time. In order to maximize the recovery of knee joint function, reduce the occurrence of postoperative complications and shorten the recovery time, and effectively improve the quality of life of the patients, we adopted routine nursing and acupuncture treatment after operation. The results showed that the HSS score in the observation group was significantly higher than that in the control group three months after operation ($P < 0.05$). Both aL DFA and aMFTA in the observation group were better than those in the control group ($P < 0.05$). The difference was statistically significant, indicating that acupuncture and moxibustion played an active role in improving the knee joint function of the patients. A remarkable effect.

CONCLUSION

The acupuncture and moxibustion can play the role of promoting blood circulation, removing blood stasis, dredging channels and collaterals, and can effectively adjust the excitation and the inhibition of the cerebral cortex and the subcutaneous autonomic nervous system, relieve the pain, and acupuncture points of the surrounding tissues of the knee joint to improve the blood circulation of the peripheral part after the joint replacement of the patient, the absorption of the inflammatory substance is promoted, and the pain is relieved. The acupuncture and moxibustion has the advantages of relaxing muscles and tendons, promoting blood circulation, removing blood stasis, and promoting blood circulation to remove blood stasis, and can be used for dredging channels and collaterals, and relieving local congestion and blood of qi and blood, and can be used for relieving muscle spasm, acupuncture, external knee eyes, and the like, and can be used for correcting the damaged bones and muscles, and the acupuncture of the Yanglingquan point, the Yin Lingquan point and the hanging clock. Because it is Gluten will, pulp will, can channel, regulating qi and blood, strong muscles and bones, pain relief and so on. Zusanli for the foot Yangming ECDC point, is the whole body strong point, can regulate the whole body Zhuyang meridian qi. Acupuncture calf nose, Weizhong, Fengshi, ring jump, Fengchi, Fengfu, if local pain is obvious, flexion unfavorable, plus Shenshu, Guan Yuan, Zusanli, Houxi, Taixi [11]. At the same time of acupuncture and moxibustion treatment, early exercise of knee joint function, that is, quadriceps femoris exercise and ankle pump exercise, can improve the stability of the knee joint. In order to promote the functional recovery of knee joints, the exercise should be gradual according to the individual differences of the patients.

To sum up, TKA combined with acupuncture treatment can relieve pain, effectively promote the recovery of knee function and improve the quality of life of patients.

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