

56 cases of clinical data analysis of electro-acupuncture treatment on postpartum urinary retention

Yanlong Lin^{1, a, *}, Qiuhua Zou^{2, b, *}, Peng Qing^{1, c}, Jing Hu^{1, d}, Canghuan Zhao^{1, e}

¹Department of Acupuncture, The First Affiliated Hospital of Jinan University, Guangzhou 510000, China;

²Department of Obstetrics, The First Affiliated Hospital of Jinan University, Guangzhou 510000, China;

^alinyalong_zhuxin@163.com, ^b1129541824@qq.com, ^cqingpeng5602@163.com,

^ddrhujing@126.com, ^eetzch@jnu.edu.cn

*The two authors contributed equally to this paper.

Abstract

Objective: To analyze the treatment efficacy of electro-acupuncture on postpartum urinary retention. **Methods:** All clinical data of acupuncture patients were collected in Department of Obstetrics and Gynecology in the First Affiliated Hospital of Jinan University. The curative effect was evaluated by statistical analysis. **Results:** The effective rate to treat postpartum urinary retention by electro-acupuncture was 92.9%. Among them, the effective rate of patients with caesarean, eutocia, primipara and multipara section were 100%, 91.8%, 89.7% and 96.3% respectively. Meanwhile, the effective of patients of middle parturient women (>30 and <35 year old) were 90% and elderly parturient women (>35 year old) with postpartum urinary retention were 100%. **Conclusion:** Electro-acupuncture has obvious curative effect on all types of postpartum urinary retention patients. It is worthy to apply in obstetrics.

Keywords

Postpartum urinary retention, electro-acupuncture, clinical data analysis.

1. Introduction

The Postpartum Urinary Retention (PUR), is a common disease of obstetric. Dysuria after delivery is the mainly clinical manifestation. It affects the recovery of maternal body and the turnover rate of obstetrics. Prevention and treatment of PUR can improve maternal recovery rate and medical quality. The Western medicine believes that the occurrence of PUR is related to dysuria, bladder tension and susceptibility, pain stimuli, psychosocial factors, and drug factors [1]. Clinically treatments used routine nursing intervention, hot compresses and massages, intramuscular injection of neostigmine, Carboprost suppository anal applying, etc. [2]. However, on the one hand, routine nursing intervention and hot compress have poor efficacy on PUR. on the other hand, no studies have been found to prove that intramuscular injection of neostigmine and Carboprost suppository anal applying do not affect lactating infants. Nevertheless, there is no treatment to the PUR in the book of Traditional Chinese Medicine [3]. Based on the affects the lactating baby with taking Chinese medicine, we have developed a simple method of using electro-acupuncture to treat PUR. The results are accurate, simple and inexpensive, and the electro-acupuncture has the advantage of no side effects for both maternal and lactating infants. The clinical data of 56 patients with PUR who were treated by electro-acupuncture in our hospital in 2017.

2. Clinical data

2.1 General data

The patients of PUR were from acupuncture consultation patients in the Department of Obstetrics in the First Affiliated Hospital of Jinan University, Guangdong Province. There were 56 patients with

PUR who could not urinate spontaneously after obstetric routine nursing intervention. The Date of all patients from Jan.1 2017 to Dec.31 2017. The patients age ranged from 23 to 42 years old, and the average age is 30 ± 4.8 ; the course of disease was 12 to 60 h, and the average is 23.8 ± 10.3 . Among the patients, 49 cases of eutocia accounted for 87.5%, 7 cases of cesarean accounted for 12.5%; 29 cases of primipara accounted for 51.8%, 27 cases of multipara accounted for 48.2%; 23 cases of normal age woman (<30 year old) accounted for 41.1%, 20 cases of middle parturient women (>30 and <35 year old) accounted for 35.7%, and elderly parturient women (>35 year old) accounted for 23.2%. The treatment time for the electro-acupuncture is consultation invitation of obstetrician within 12 h.

2.2 Standard of diagnosis

Refer to the Postpartum Disease [4] and Chinese and Western Medicine Combined with Obstetrics and Gynecology[1], the patients conditions of PUR: 1) has a history of labor extension and surgical history, 2) has urinary drip or occlusion, abdominal pain and acute pain after delivery for 6-8 h or puerperium, 3)has lower abdomen bulging, bladder filling and tender, 4) has normality in urine routine examination, 5)was excluding other non-productive urinary system diseases.

3. Therapeutic method

Take the mainly acupoint of Zusanli(ST36), Xuehai(SP10), Sanyinjiao(SP 6) and Taichong(LR3) to treated the PUR. while, the patients with delivery were connect the acupoint of Zhongji(CV3) and Guanyuan(CV4), and the patients with cesarean were connect the acupoint of umbilical ring acupoint (heart and kidney) [5]. The Taichong(LR3) acupoint gives strong stimulation, and other acupoint are given moderate stimulation to make patients feel soreness. Continuous low-frequency continuous wave was selected for continuous stimulation, and the patients has felt without pain for 30 min daily.

The umbilical ring acupoint is a specific point of Zhuang medicine in the periphery of the human navel. The positioning and operation methods of the heart and kidney points of the umbilical ring acupoint are shown in Fig. 1 and Fig. 2. The heart acupoint is positioned at point a, and the direction of the needle is from a toward b. The kidney acupoint is positioned at point c, and the direction of the needle is from c toward d. Their angle between the needle insertion direction and the skin surface is 10° . Connect the electroacupuncture therapy device, and continuous stimulation after the needle is inserted. (To avoid contact between the two needle handles. Need to use cotton in the middle of the needle handle.)

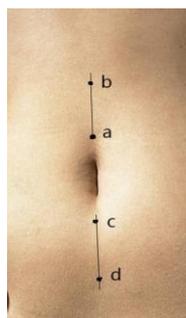


Fig. 1 Left sketch map of umbilical ring acupoint (overlook)

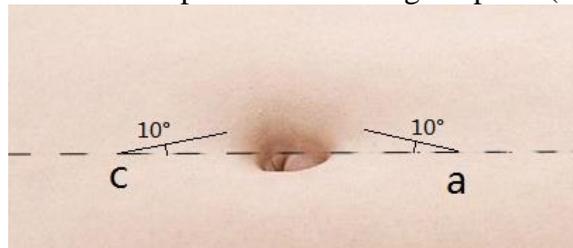


Fig. 2 Right sketch map of umbilical ring acupoint (side view)

4. Efficacy evaluation

According to the Postpartum Disease to establish the efficacy standard. The cure evaluation was the patients smooth urinated spontaneously within 1 days of treatment. Remarkable effect evaluation was the patients can smooth urinated spontaneously within 2 days of treatment. Effectivity evaluation was the patients urinated spontaneously, whereas the urination is not smooth within 2 days of treatment. No effect evaluation was the patients urinated un-spontaneously after 2 days of the treatment [4].

5. Results

The total effective rate of 56 patients with postpartum urinary retention by electroacupuncture was 92.9% (Table 1, 2 and 3). The effective rate of patients with caesarean, eutocia, primipara and multipara section were 100%, 91.8%, 89.7% and 96.3% by electro-acupuncture, respectively. Meanwhile, the effective of patients of middle parturient women (>30 and <35 year old) and elderly parturient women (> 35 year old) with postpartum urinary retention were 90% and 100%, respectively. In the maternal women (table 1), 4 patients with ineffectiveness were collected according to the efficacy evaluation criteria, 3 patients can urinate spontaneously and smoothly within 3 days, and 1 patient was treated in within 4 days. In sum, the maternal disease duration, production mode, production history and production age did not affect the effect of electro- acupuncture treatment. The efficacy of PUR with each puerperal patient after electro-acupuncture treatment has no significant difference.

Table 1 Clinical effect of electro-acupuncture on PUR in eutocia and caesarean maternal

Maternal Type	Individual	Cure No.	Prominence No.	Effectivity No.	InvalidityNo.	EffectiveRate
eutocia	49	27	13	5	4	91.8%
caesarean	7	4	2	1	0	100%
Sum	56	31	15	6	4	92.9%

Table 2 Clinical effect of electro-acupuncture on PUR in primipara and multipara maternal

Maternal Type	Individual	Cure No.	Prominence No.	Effectivity No.	Invalidity No.	Effective Rate
primipara	29	16	7	3	3	89.7%
multipara	27	15	8	3	1	96.3%
Sum	56	31	15	6	4	92.9%

Table 3 Clinical effect of electro-acupuncture on PUR in difference age maternal

Maternal Type	Individual	Cure No.	Prominence No.	Effectivity No.	Invalidity No.	Effective Rate
Eligible(<30)	23	14	5	2	2	91.3%
Older (>30 and <35)	20	10	6	2	2	90%
Elder(>35)	13	7	4	2	0	100%
Sum	56	31	15	6	4	92.9%

6. Discussion

This study collected and analyzed the clinical data of PUR in our hospital in 2017. The results showed that the total effective rate was 92.9%, which was consistent with the results of related reports and studies. For instance, Pang yong et al. [6] used the acupuncture to treat PUR in 50 cases, and the total effective rate was 96%. Gao Yanhong [7] treated 30 cases of PUR with acupuncture, the results were all effective and the total effective rate was 100%. The results lower than these studies had 2 reasons.

One hand, their efficacy evaluation was performed after acupuncture treatment for 5 days, however, this article refers to evaluation of the efficacy within 2 days by Postpartum Disease. On the other hand, the acupuncture points what they used complicated, and the patients were all maternity women. At the same time, in addition to acupuncture, it also cooperated with moxibustion and other operations which were consumes manpower and material resources. Liu Jinhe et al. [8] used acupuncture and massage to treat PUR in 35 cases and compared with intramuscular neostigmine. The total effective rate of acupuncture massage group was 97.1%, which was better than the control group ($p < 0.05$). It is worth noting that the total effective rate of this clinical data analysis was 92.9%, which was significantly higher than the total effective rate of intramuscular neostigmine by 88.5%. Compared with the three methods of acupuncture, moxibustion and massage, the acupuncture prescription and operation method better than massage and intramuscular neostigmine. At the same time, we analyzed the data of all PUR patients in the acupuncture department of our hospital in 2017, and did not except urinary retention patients with caesarean section. The results were comprehensive and representative of actual clinical data.

PUR in the Acupuncture and Moxibustion [9] did not have the corresponding pathogenesis and syndrome differentiation. Consider the PUR process and characteristics, it can be known to be different from general urinary retention. Women need long-term exertion during childbirth, and with the factors such as bleeding, sweating and mental stress, and then consume the body's energy and fluids. Therefore, PUR occurred mainly because of the weakness of the body. This description consistent with Fu Qing zhu's Gynecology Prescription, which pointed out that women had more weakness and more stagnation after childbirth. In addition, combined with the physiological characteristics of childbirth behavior, the urinate impeded due to dysfunction of bladder is the main manifestation. It is nearly related to the liver, kidney, spleen, liver channel and conception vessel in Chinese Traditional Medicine. Hence, the acupoints with the electro-acupuncture treatment selected by strengthen the human body, improve circulation and urination function.

Since the The Yellow Emperor's Internal Classic, the acupoints of Zusanli(ST36) has been used as an important acupoints for strengthening the body. It can stimulate the body's function of digestion absorption, and the water metabolism. Stimulating Sanyinjiao(SP 6) can improve the operation of energy in the human body, what involved the liver, spleen and kidney channel. The acupoint of Blood is an important acupoint for improving body fluid circulation. Taichong(LR3) acupoint belongs to liver channel, which can clear the energy of the pathological position and help to restore, and also can regulate human emotions. It is beneficial to postpartum depression caused by factors changes in hormonal and social relationships changes in the maternal after childbirth. In the Chinese Traditional Medicine, the Zhongji(CV3) and Guanyuan(CV4) acupoints are closely related to bladder function.

This treat method has been carried out in our hospital for several years, and its clinical efficacy has been recognized by doctors and patients of Obstetrics Department. After a lot of clinic practice, we found a very good prescription of Acupoints and operation methods plan. And we summed up all the data. Analysis these clinical data, we confirmed PUR patient of all types had obvious curative effect after electro-acupuncture treatment. Electro-acupuncture is worthy applied in Obstetrics Department.

References

- [1] Z.L.You,H.L.Du:Obstetrics and Gynecology of Chinese and Western Integrative Medicine (China Press of Traditional Chinese Medicine,China 2006),p.368.
- [2] M.F.Yang:Effect of Methyl Carboprost Suppository on Urinary Retention and Abdominal Distention after Childbirth and Surgery,Journal of Hainan Medical University,17(2011)No.11, p.1528.
- [3] Z.Y.Zhou:Chinese Internal Medicine(China Press of Traditional Chinese Medicine, China 2007),p.349-357.
- [4] Y. Chen:Postpartum Disease(China Medical Science Press, China 2009),p.170.

- [5] J.M.Huang,G.H.Huang,Q.Z.Su,N.Song, M.K. Li,K.Huang:Umbilical Ring Acupoints and Its Clinical Application in Zhuang Medicine,Chinese Acupuncture and Moxibustion, 33(2013) No.06, p.561-564.
- [6] Y.Pang,H.H.Wei,J.Wu,L.Z.Wei,X.C.Li:50 Cases of Clinical Data Analysis Acupuncture Treatment on Postpartum Urinary Retention,Guangxi Journal of Traditional Chinese Medicine, 36(2013)No.06,p.24-25.
- [7] Y.H.Gao:30 Cases of Clinical Data Analysis Acupuncture Treatment on Postpartum Urinary Retention, Clinical Journal of Chinese Medicine, 07(2015)No.05,p.53.
- [8] J.H.Liu,J.T.Liu,H.Zhen,G.P.Zhang, H.Q. Fu,Y.H.Yin, J. Zhao:Clinical Observation of 35 Cases by Acupuncture and Massage Treatment on Postpartum Urinary Retention,World Latest Medicine Information,16(2016)No.44,p.96.
- [9] X.M.Shi:Acupuncture and Moxibustion(China Press of Traditional Chinese Medicine,China 2002) p.251-253.