

The Effectiveness of Acupuncture in Preventing and Managing Catheter-Related Bladder Discomfort after Transurethral Surgery: A Prospective Randomized Controlled Trial



Cao Feng-Qin, Ma Di-Yuan and Pang Ran
Guang'anmen Hospital, China Academy of Chinese Medical Sciences

Hypothesis / aims of study

Catheter-related bladder discomfort (CRBD) is characterized by urinary frequency, urgency, and discomfort in the suprapubic region related to indwelling catheter. CRBD is one of the most upsetting post-operative complications because it can not only prolong hospital stay, but also extremely weaken patients' quality of life. The management of CRBD remains challenge although a number of treatments are available. Our study aims to investigate the effectiveness of acupuncture in preventing and managing CRBD after transurethral surgery.

Study design, materials and methods

PICOS

P-Patients with Benign Prostate Obstruction or Bladder Neck Obstruction

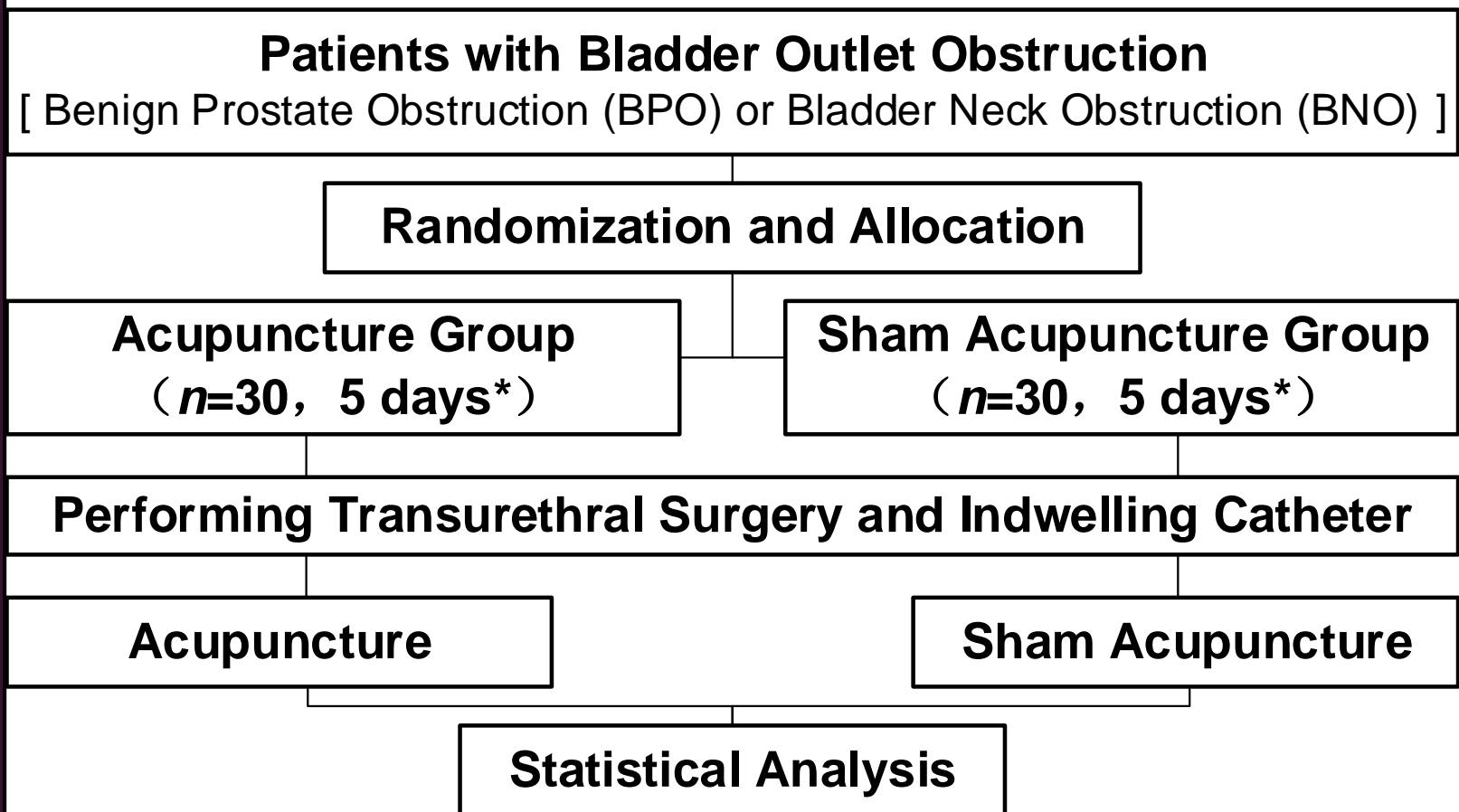
I–Acupuncture, acupoint:CV3 ,CV4 ,bilateral SP6, SP9 , ST36 and LR3

C-Sham Acupuncture , Non-channel and non-acupoint area

O-prevalence of moderate to severe CRBD, the types and doses of additional medication , the scores of PPBC、VAS and IPSS-QoL

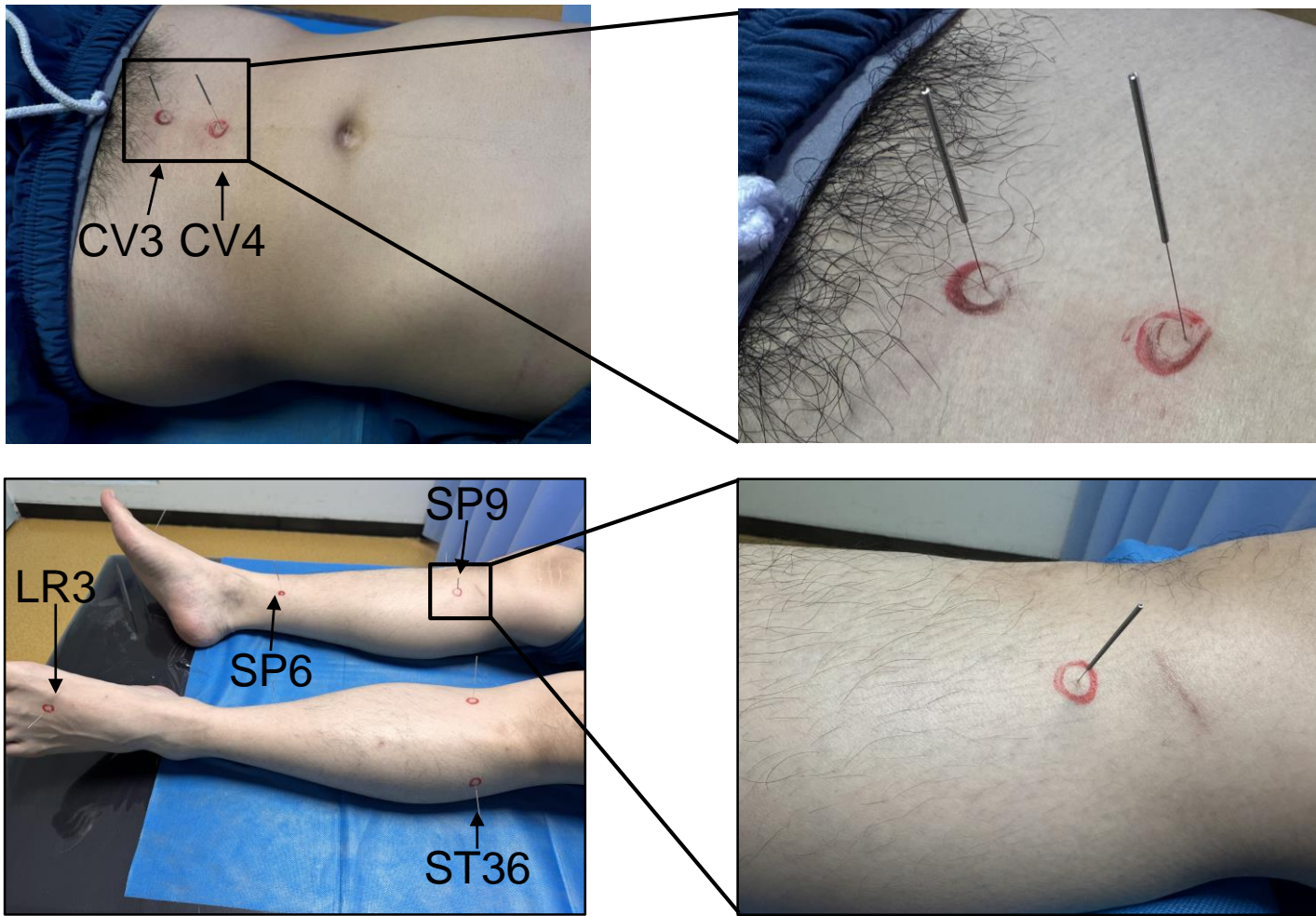
S-a Prospective Randomized Controlled Trial

Study Flow Chart

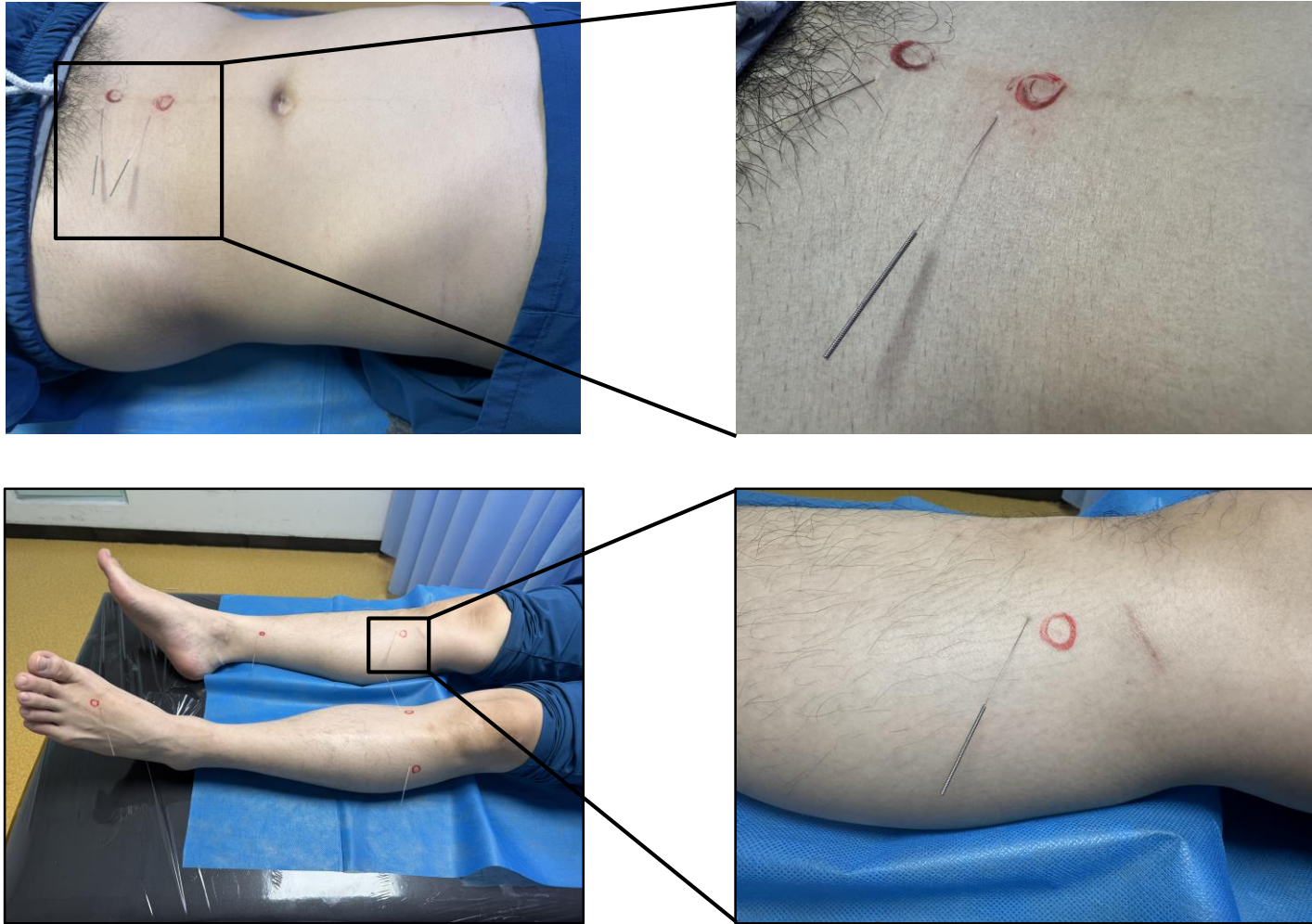


* Patients in acupuncture group received the acupuncture treatment while the counterparts in sham-acupuncture group received the sham-acupuncture from the day before surgery to the third day after surgery.

Acupuncture



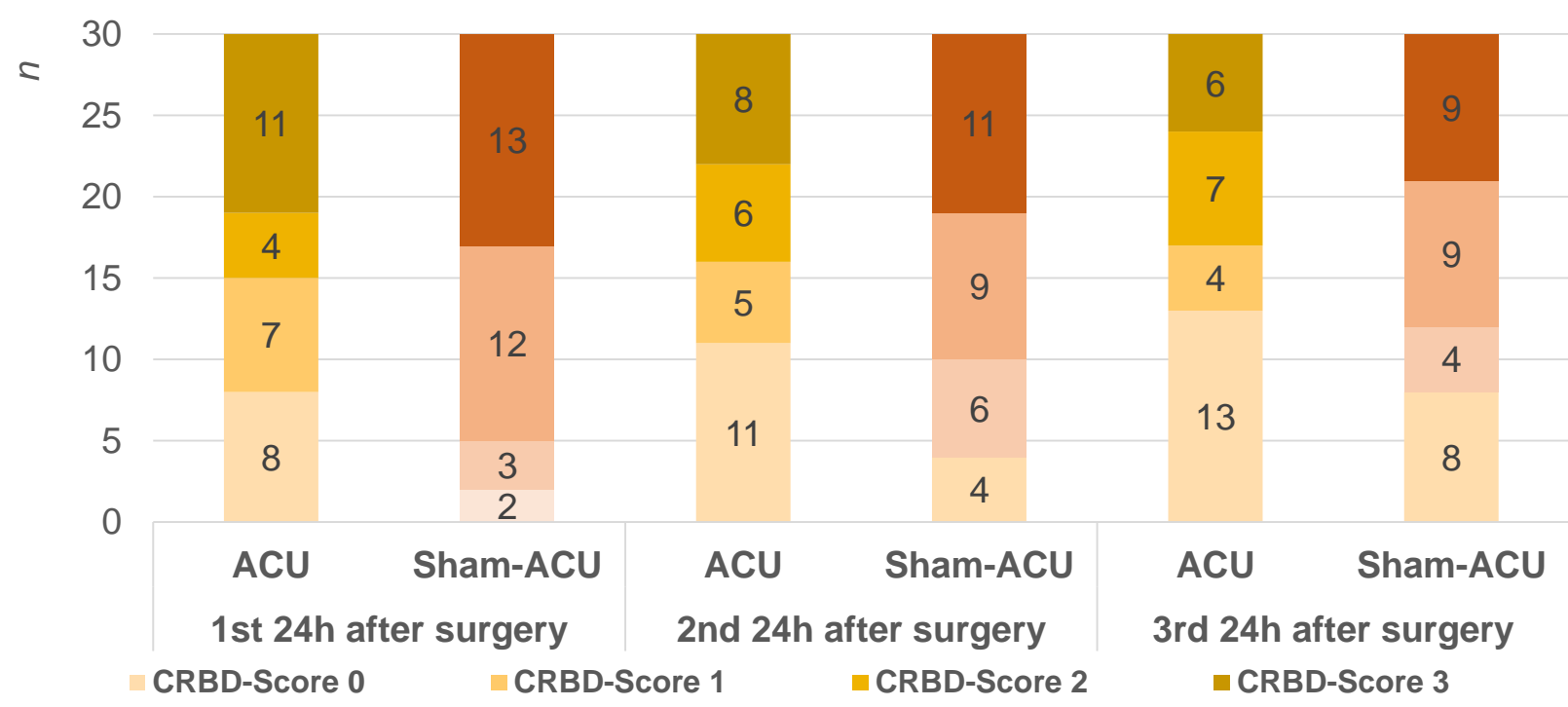
Sham Acupuncture



※ This study was approved by the Ethics committee of our hospital, and written informed consent was obtained from each subject.
※ Data analysis was based on the intention to treat (ITT) principle.
※ Continuous variables were expressed as the mean ± standard deviation or median (interquartile range) while categorical variables were expressed as percentage and frequency.
※ Difference between two groups was compared by two sample t-test, Mann-Whitney U test or Chi-square test when appropriate. All reported P-values were two-sided, $P<0.05$ was considered statistically significant.

Results and interpretation

Prevalence of CRBD after Surgery



※ Acupuncture group had a significantly lower prevalence of CRBD in the first and second 24 hours after surgery than sham-acupuncture group ($P<0.05$)

Groups	Prevalence of CRBD		
	1 st 24h after surgery	2 nd 24h after surgery	3 rd 24h after surgery
ACU	22(73%)	19(27%)	17(57%)
Sham-ACU	28(93%)	26(87%)	22(73%)
P value	0.038	0.037	0.176

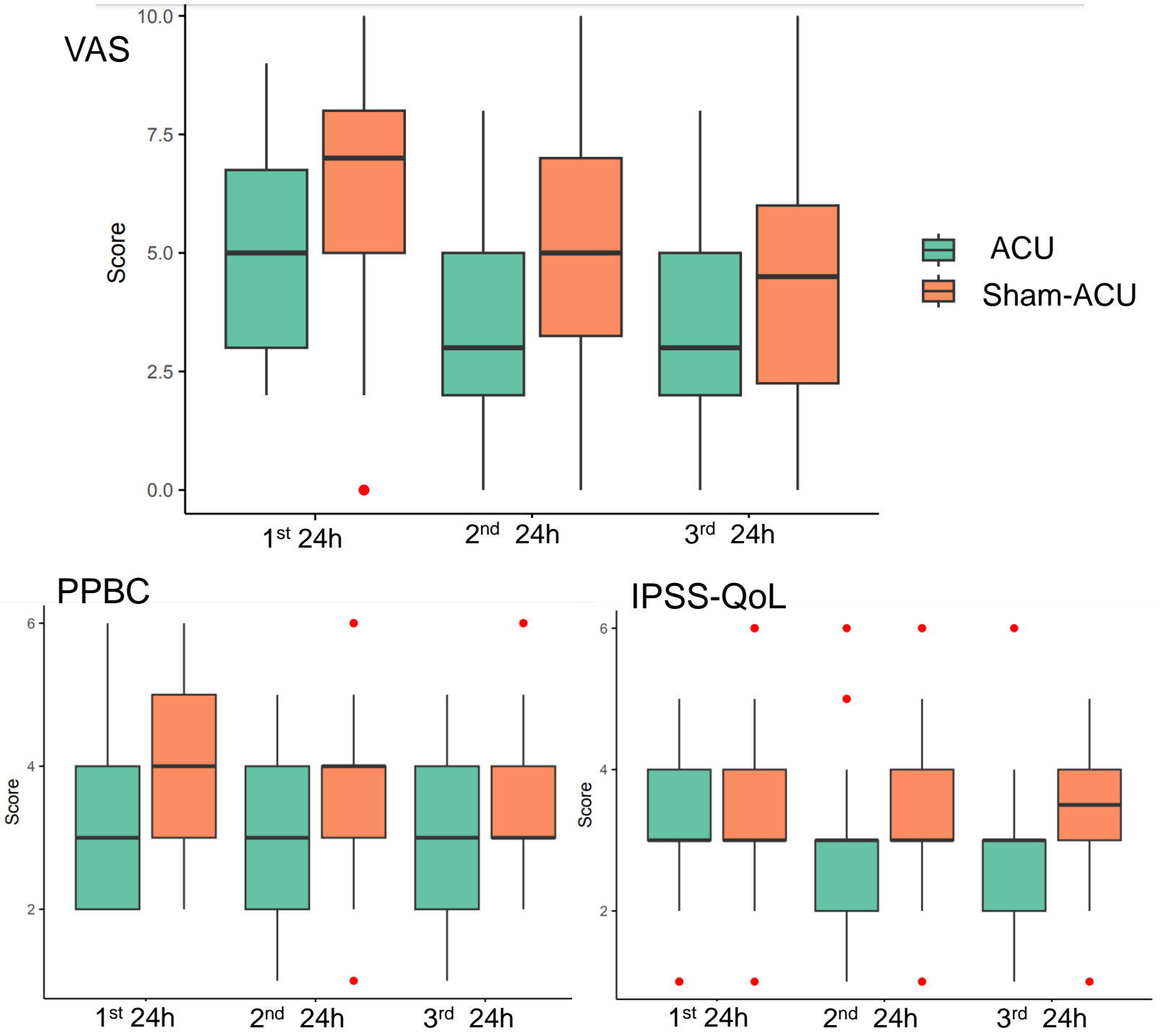
Groups	Prevalence of moderate to severe CRBD		
	1 st 24h after surgery	2 nd 24h after surgery	3 rd 24h after surgery
ACU	15(50%)	11(47%)	13(43%)
Sham-ACU	25(83%)	20(67%)	18(63%)
P value	0.013	0.192	0.301

Groups	Number of patients receiving additional medication		
	1 st 24h after surgery	2 nd 24h after surgery	3 rd 24h after surgery
ACU	11(36%)	8(26%)	6(20%)
Sham-ACU	11(36%)	10(33%)	7(23%)
P value	1	0.573	0.754

※Acupuncture group had a significantly lower prevalence of moderate to severe CRBD in the first 24 hours after surgery ($P<0.05$).

※ No significant difference was detected in the number of patients receiving additional medication between two groups ($P>0.05$).

Scores of VAS, PPBC, IPSS-QoL after Surgery



※ Acupuncture group presented a significantly lower PPBC score in the first 24 hours after surgery, as well as VAS scores in the first and second 24 hours after surgery compared to sham-acupuncture group ($P<0.05$).

※ Acupuncture group demonstrated a significant lower IPSS-QoL score only in the third 24 hours after surgery compared to sham-acupuncture group ($P<0.05$)

Conclusions

Our study suggests that acupuncture may reduce the prevalence and severity of postoperative CRBD. However, whether acupuncture can reduce the use of additional medication in patients with postoperative CRBD still needs to be investigated in future well-designed study.

References

- Wilson M. Causes and management of indwelling urinary catheter-related pain. Br J Nurs. 2008;17(4):232-239.
- LI S, LI P, WANG R,et al. Different interventions for preventing postoperative catheter-related bladder discomfort: a systematic review and meta-analysis [J]. Eur J Clin Pharmacol, 2022, 78(6): 897-906.