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Supplementary Files

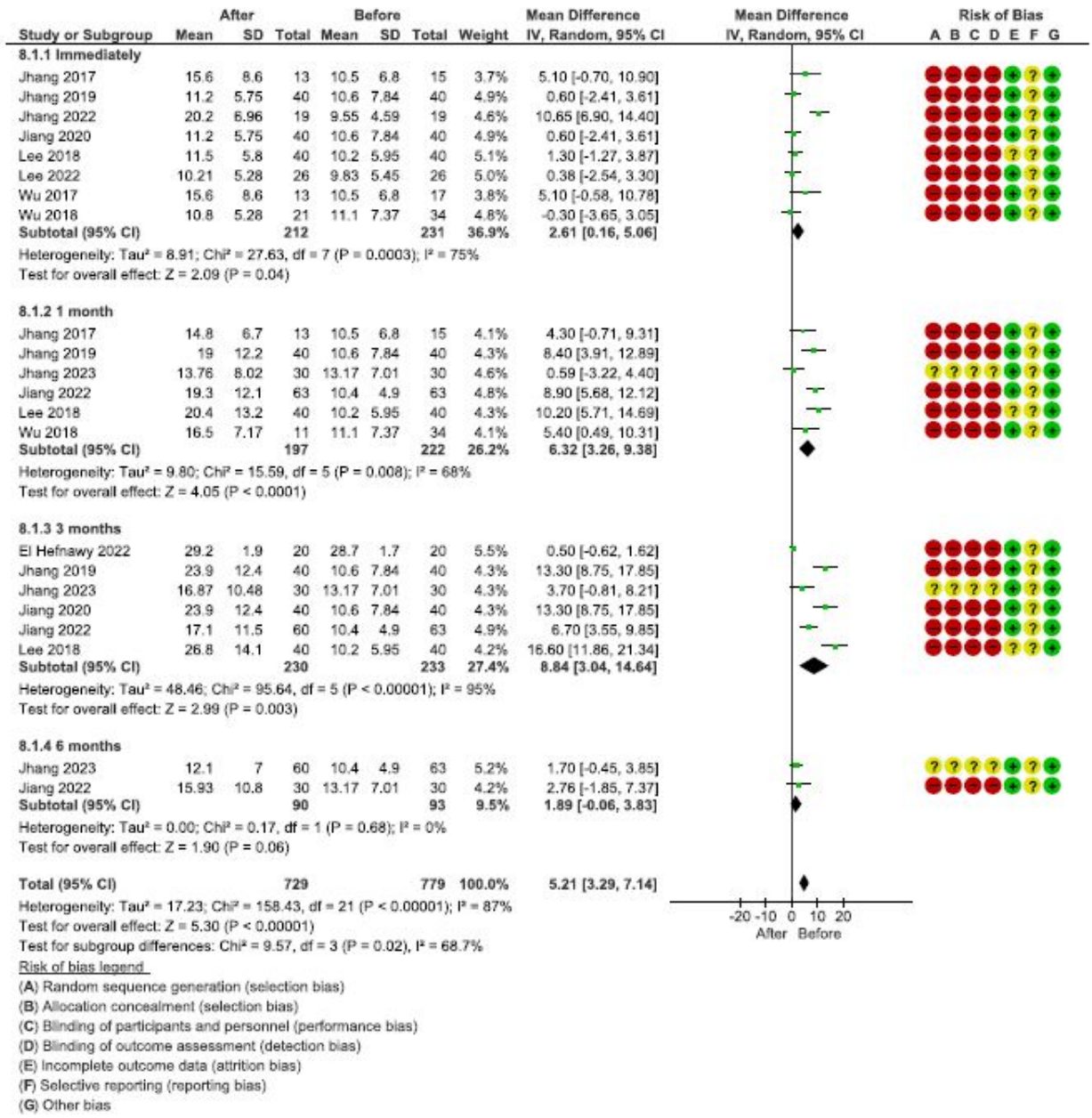

Figure S1. The effect of PRP on Maximum flow rate (Qmax) at different time points

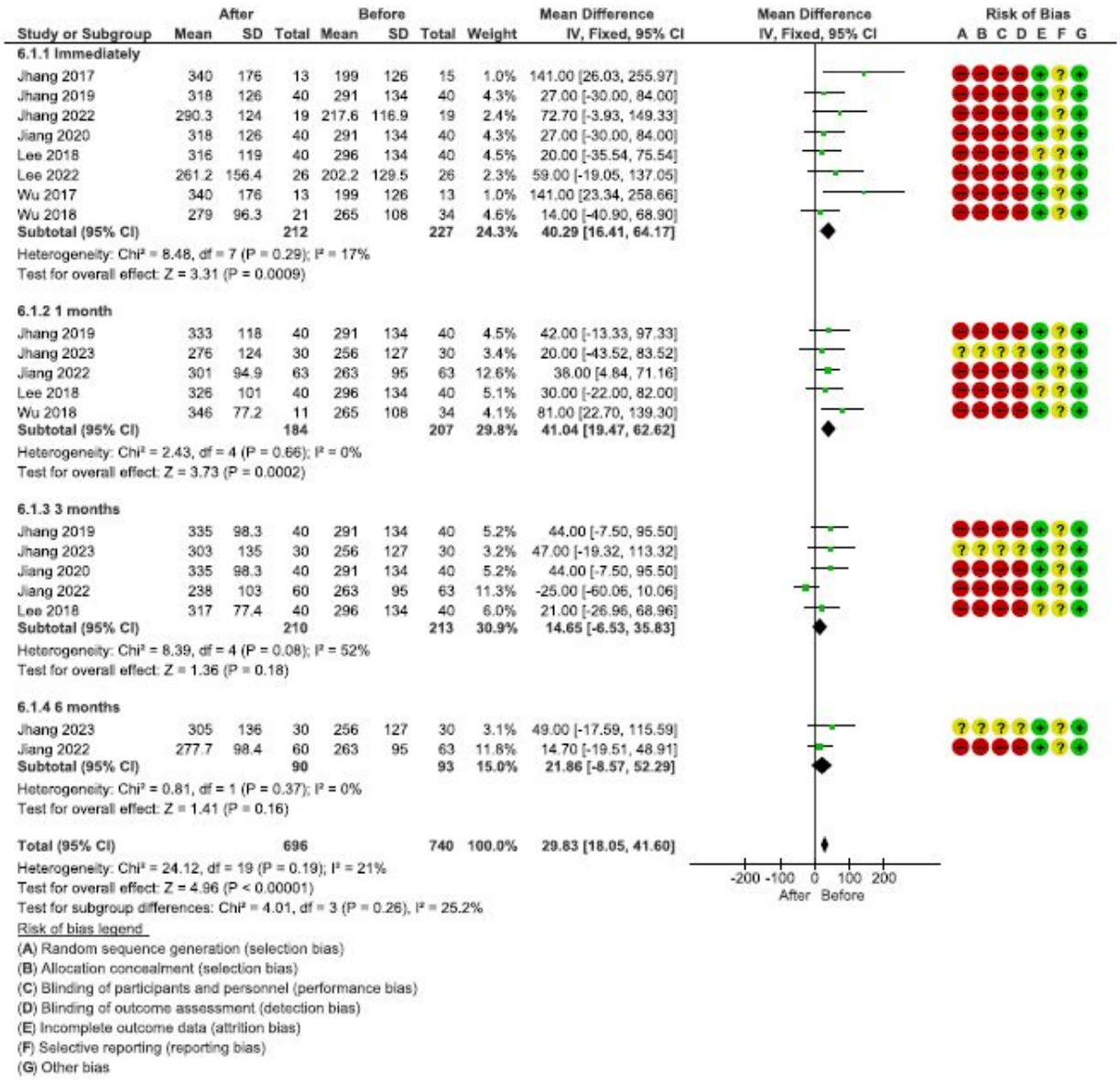

Figure S2. The effect of PRP on Functional bladder capacity at different time points

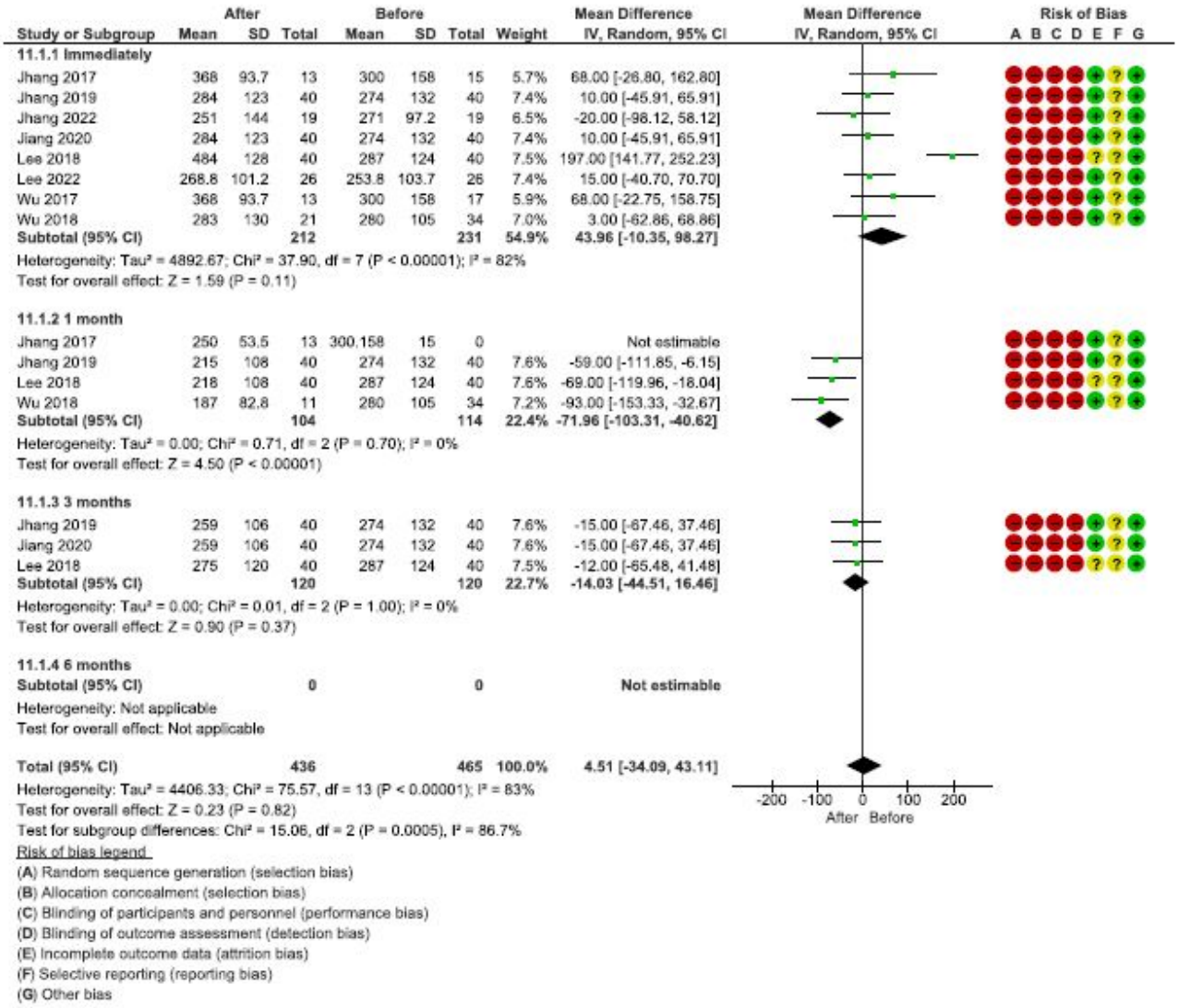

Figure S3. The effect of PRP on Cystometric bladder capacity at different time points

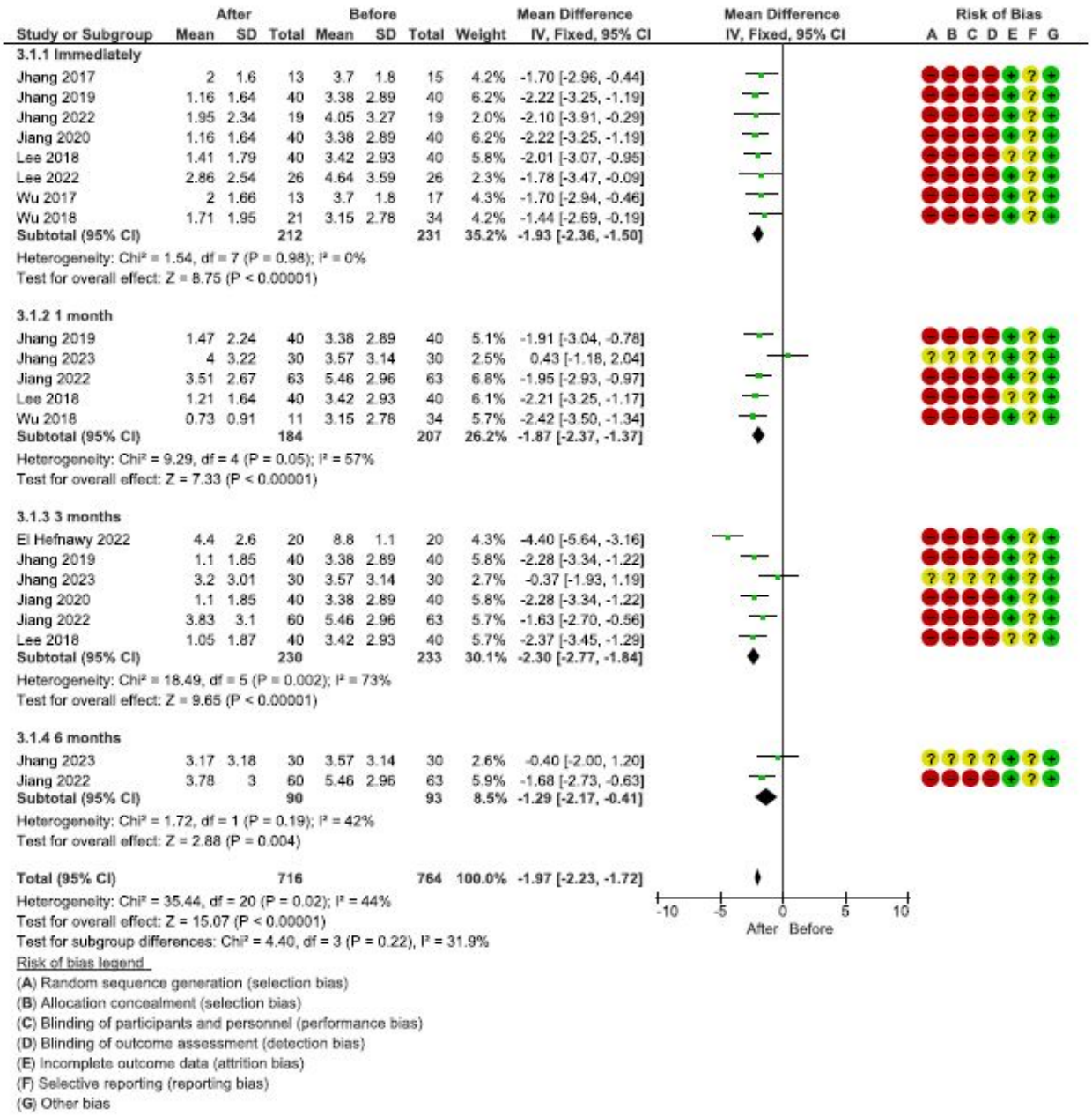

Figure S4. The effect of PRP on VAS score at different time points

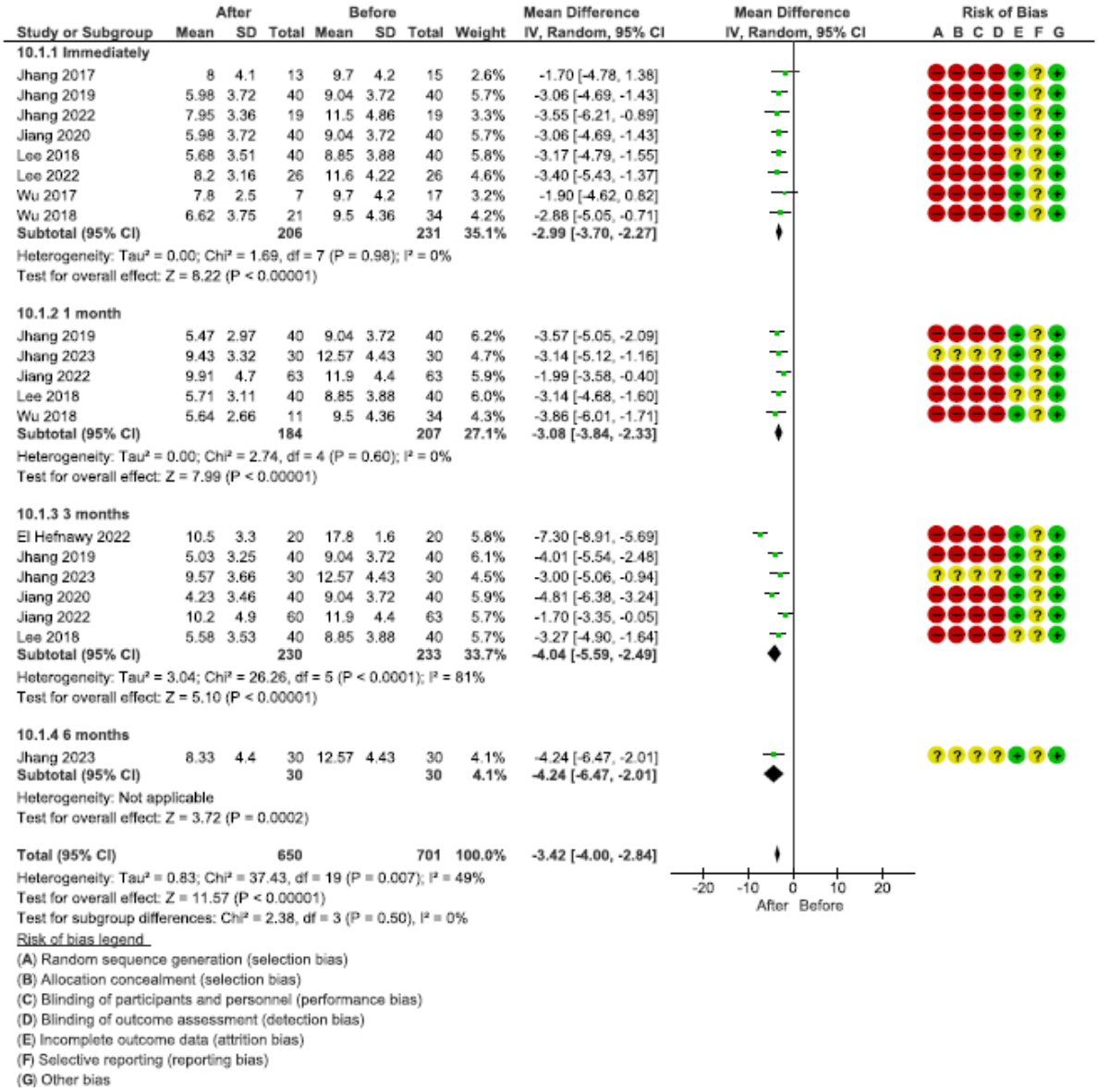

Figure S5. The effect of PRP on ICSI score at different time points

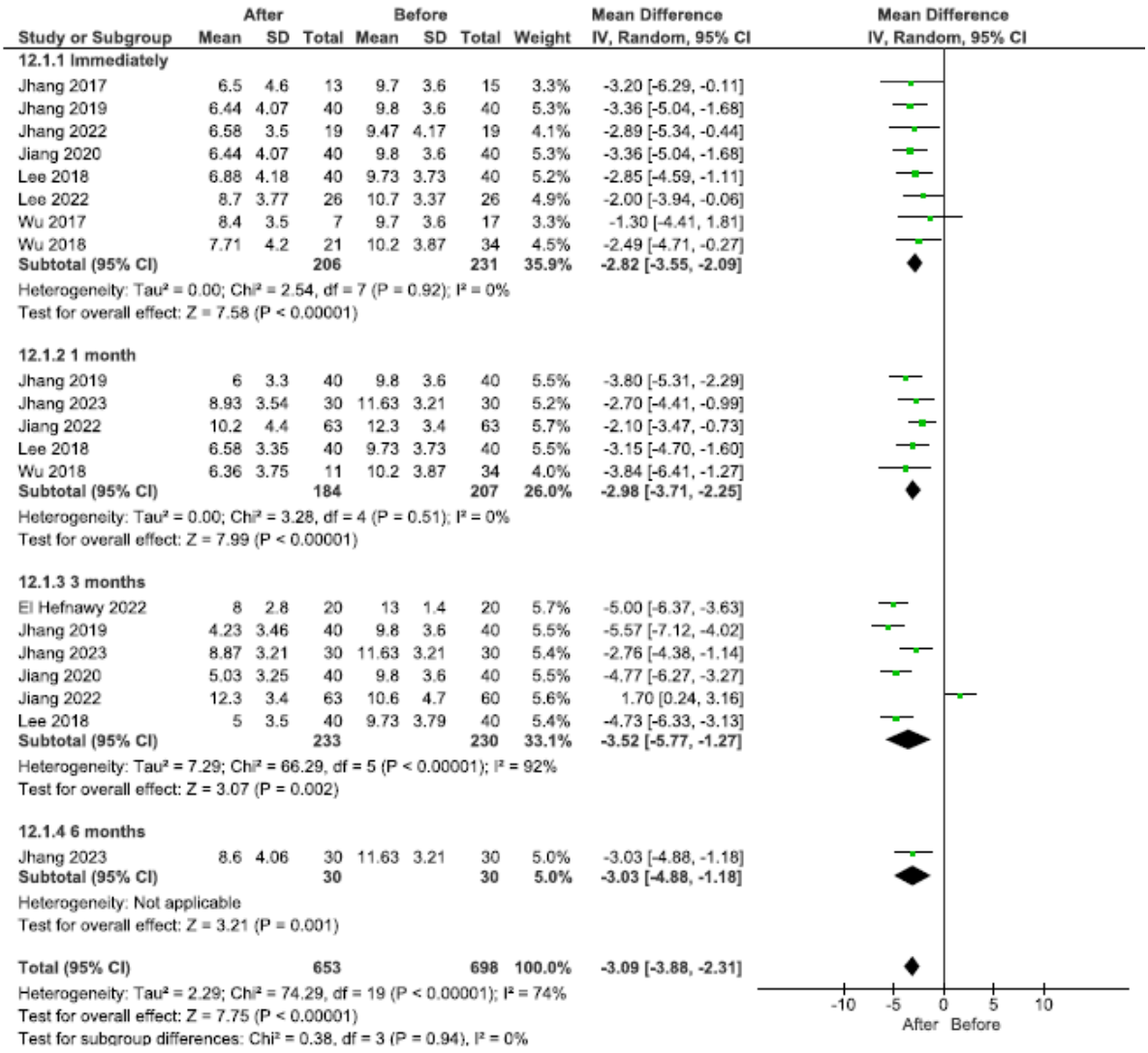

Figure S6. The effect of PRP on ICPI score at different time points

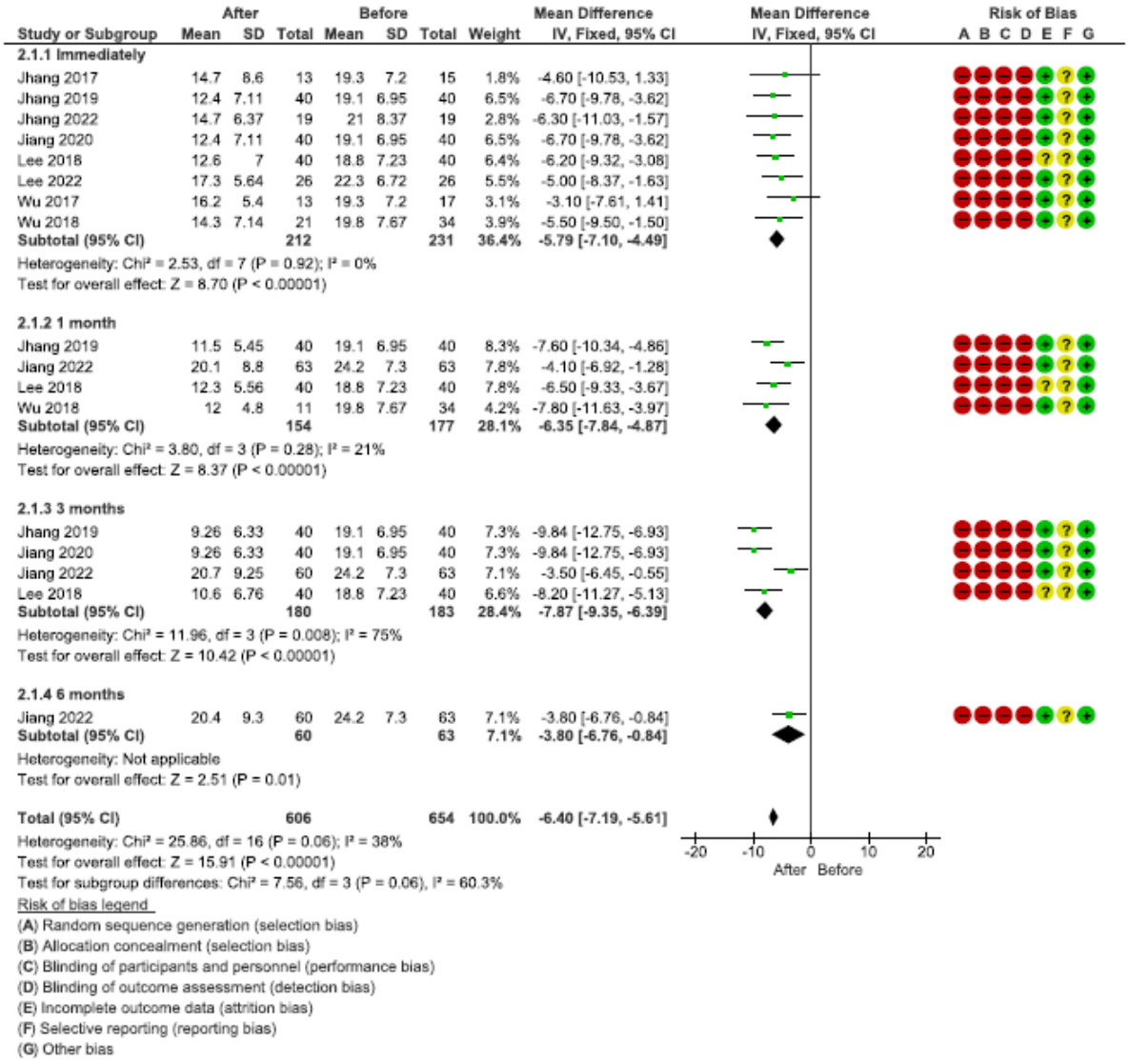

Figure S7. The effect of PRP on OSS at different time points

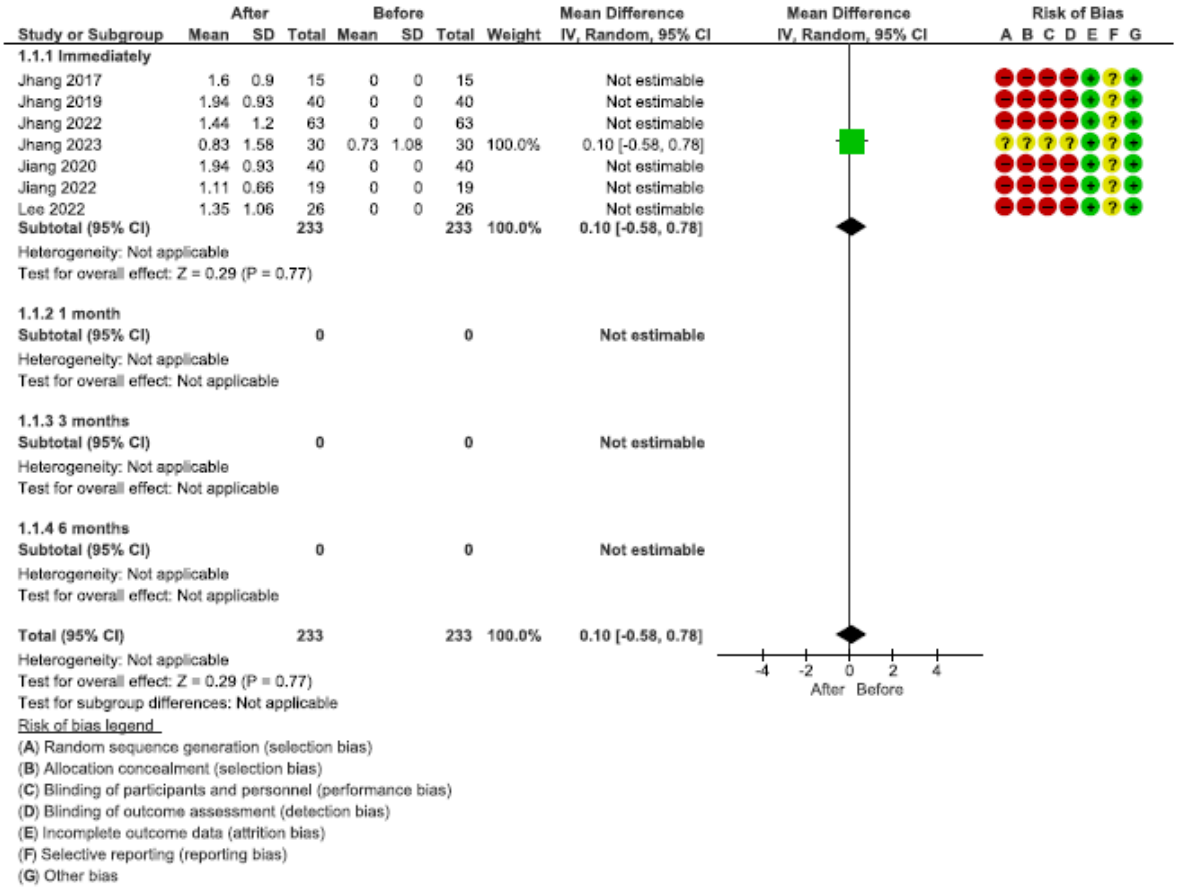

Figure S8. The effect of PRP on GRA at different time points

Supplementary File 1. Search strategy in PubMed				
Search number	Query	Sort By	Filters	Results
3	(((((((("Platelet-Rich Plasma"[Mesh]) OR ((Platelet[Text Word] AND Rich[Text Word] AND Plasma[Text Word]))) OR (Platelet-rich plasma[Text Word])) OR ((platelet[Text Word] AND enrich*[Text Word] AND plasma[Text Word]))) OR (Platelet-Rich Fibrin[Text Word])) OR ((Platelet[Text Word] AND Rich[Text Word] AND Fibrin[Text Word]))) OR (PRP[Text Word])) OR (Autologous conditioned plasma[Text Word])) AND ((((((((("Cystitis, Interstitial"[Mesh]) OR ("Prostatitis"[Mesh])) OR ("Pelvic Pain"[Mesh])) OR ((Interstitial[Text Word] AND Cystitis[Text Word]))) OR ((Interstitial[Text Word] AND Cystitides[Text Word]))) OR ((Bladder[Text Word] AND Pain*[Text Word] AND Syndrome*[Text Word]))) OR ("Interstitial Cystitis/Bladder Pain Syndrome"[Text Word])) OR ("IC/BPS"[Text Word])) OR ((pelvi*[Text Word] AND pain*[Text Word]))) OR (Prostatitides[Text Word])) OR (Prostatitis[Text Word]))			44
2	((((((((("Cystitis, Interstitial"[Mesh]) OR ("Prostatitis"[Mesh])) OR ("Pelvic Pain"[Mesh])) OR ((Interstitial[Text Word] AND Cystitis[Text Word]))) OR ((Interstitial[Text Word] AND Cystitides[Text Word]))) OR ((Bladder[Text Word] AND Pain*[Text Word] AND Syndrome*[Text Word]))) OR ("Interstitial Cystitis/Bladder Pain Syndrome"[Text Word])) OR ("IC/BPS"[Text Word])) OR ((pelvi*[Text Word] AND pain*[Text Word]))) OR (Prostatitides[Text Word])) OR (Prostatitis[Text Word])			49,086
1	(((((((("Platelet-Rich Plasma"[Mesh]) OR ((Platelet[Text Word] AND Rich[Text Word] AND Plasma[Text Word]))) OR (Platelet-rich plasma[Text Word])) OR ((platelet[Text Word] AND enrich*[Text Word] AND plasma[Text Word]))) OR (Platelet-Rich Fibrin[Text Word])) OR ((Platelet[Text Word] AND Rich[Text Word] AND Fibrin[Text Word]))) OR (PRP[Text Word])) OR (Autologous conditioned plasma[Text Word])			29,872

Supplementary File 2

Table S1. Characteristics of the included studies

Citation	Country	Design	Area of bladder treated	Intervention						Intervention group				Control	F/U	A/E	Main outcomes	Overall results
				Type	Number of injections	Dose	Frequency	Route of administration	Blood sample	Duration	Number	Condition	Age	Gender (F/M)	Duration of disease				
Jhang (2019)[22]	Taiwan	Prospective clinical trial	Posterior and lateral walls of the bladder	PRP	20	10 mL	Monthly	Intravesical, suburothelium	50 mL whole blood	4 months	40	IC/BPS who had failed conventional treatment	55.5 ± 11.1	37/3	In GRA ≥ 2 group: 12.6 ± 9.01 years; In GRA < 2 group: 17.2 ± 8.59 years	None	Every month nd 3 months after the 4th PRP treatment day. They were also followed up for the therapeutic duration for up to 12	None	Global Response Assessment (GRA), O'Leary-Sant symptom score (OSS), visual analog scale (VAS) of pain, daily frequency, nocturia, functional bladder capacity (FBC), maximum flow rate, voided volume, post-void residual volume (PVR)	The study demonstrated that repeated intravesical injections of autologous PRP can increase bladder capacity and provide IC symptom improvement in patients with IC/BPS refractory to conventional therapy. Autologous PRP injection is safe and effective in selected patients.

Jhang (2019)[31]	Jiang (2022)[24]	Lee (2022)[27]
Taiwan	Taiwan	Taiwan
Prospective clinical trial	Prospective clinical trial	Prospective clinical trial
Posterior and lateral walls of the bladder	Posterior and lateral walls of the bladder	Posterior and lateral walls of the bladder
PRP	High and low dose PRP with different preparation and injection sites	PRP
4	1	4
12 mL	10 mL	10 mL
Monthly	Once	Monthly
Suburothelial	intravesical	Intravesical, suburothelium
50 mL whole blood	100 ml of whole blood	50 mL whole blood
4 months	Once	4 months
13	60	26
IC/BPS was refractory to conventional treatments	IC/BPS	Refractory non-ulcer IC/BPS
52.9 ± 12.1	NR	58.6 ± 14.2
All F	NR	NR
NR	NR	NR
None	None	None
1 month	1 month, 3 months (3 months after single high-dose PRP and before 4th low-dose PRP), and 6 months (6 months after single high-dose PRP and 3 months after 4th low-dose PRP)	4 months
NR	No AEs related to PRP injections, such as UTIs or acute urinary retention, occurred throughout the current study	NR
Primary: change in O'Leary-Sant symptom (OSS) index; Secondary: pain (measured using a visual analog scale [VAS]), daily frequency, nocturia, functional bladder capacity (FBC), maximum flow rate, voided volume, post-void residual (PVR) volume, and global response assessment (GRA). ICSI, ICPI, cytokine level	IC symptom index (ICSI) and problem index (ICPI), visual analog scale (VAS), global response assessment (GRA), and urodynamic parameters.	functional bladder capacity (FBC), urinary frequency and number of nocturia episodeو A 10-point Visual Analog Scale (VAS) to evaluate the severity of bladder pain and the O'Leary–Sant symptom score (OSS) questionnaire
Repeated intravesical PRP injections are well tolerated and appear to be safe and effective in medically refractive IC/BPS, providing significant symptom improvement	Intravesical PRP injection is effective for IC/BPS. The addition of normal saline or plasma and injection site had no influence on therapeutic efficacy. However, the symptom improvement and GRA after a single high-dose PRP injection was lower than that after four low-dose PRP	Repeated intravesical PRP injections are effective for improving IC/BPS symptoms as they promote urothelial ultrastructural defect recovery.

Jhang (2022)[21]	El Hefnawy (2022)[19]	Jiang (2020)[25]	Jhang (2023)[23]
Taiwan	Egypt	Taiwan	Taiwan
?	Prospective clinical trial	Prospective clinical trial	Prospective cohort
posterior and lateral walls of the	?	Posterior and lateral walls	20 well-distributed sites at posterior and lateral bladder wall
PRP	PRP	PRP	PRP
4	6	4	4
NR	50 mL	10 mL	NR
Monthly	Weekly	Monthly	Monthly
Intravesical	Intravesical	Intravesical	?
? mL of peripheral blood	150 mL of blood sample	peripheral blood platelet concentration	?
4 months	12 weeks	4 months	4 months
19	20	40	30
IC/BPS without Hunner's	IC/BPS	IC/BPS	IC/BPS who were refractory to conventional treatment
55.6 ± 15.8	38.7 ± 10	55.5 ± 11.1	52.57 ± 11.08
16/3	All F	37/3	All F
NR	NR	NR	10.27 ± 8.85 years
None	None		IC/BPS who were refractory to conventional treatment and received BoNT-A ($n = 26$)
7–10 days after fourth PRP injection	12 weeks	3 months after the last injection	6 month
NR	All the patients reported discomfort with blood sample withdrawal, and no other adverse events were		patients in the BoNT-A group complained of dysuria after treatment, and a significantly higher rate of urinary tract
Changes in the O'Leary-Sant symptom score (OSS) including IC symptom index (ICSI) and IC	The primary: visual analog scale (VAS) for pain; the secondary endpoints: the IC symptom index, IC problem index of the O'Leary-Sant questionnaire and global response assessment, urine culture, and uroflowmetry.	The clinical parameters included visual analog scale (VAS) pain score, daily urinary frequency, nocturia episodes, functional bladder capacity, and global response assessment (GRA).	Primary: global response assessment (GRA), secondary outcome: changes in the O'Leary-Sant IC symptom score, visual analog score (VAS) of bladder pain, voiding diary, and uroflow measures
The level of urothelial barrier function protein and cell	Repeated intravesical instillation of PRP could be considered an effective and safe approach for treating IC/BPS	Repeated intravesical PRP injections provided significant symptom improvement in IC/BPS patients with concomitant changes in the related biomarker levels	Both intravesical PRP and BoNT-A injections have similar efficacy in IC symptom improvement.

Hung (2022)[20]	Taiwan	Prospective clinical trial	NR	Nanofat grafts + PRP		8 mL	Once	?	20-mL whole blood	Once	6	Refractory IC/BPS	46.3 ± 4.7	All F	24.7 ± 13.6 months	None	6 months	No significant AE	GRA, ICSI, ICPI, Pain-VAS, Cystoscopic capacity		Our preliminary results suggest novel intravesical therapy with autologous Nanofat plus PRP grafting is safe and effective for refractory IC/BPS
Studies without access to full text																					
Wu (2017)[29]	Taiwan	Prospective clinical trial	?	PRP	4	10-12 mL	Monthly	intravesical	50ml of patient's own whole blood	?	13	Refractory IC/BPS	52.9 ± 12.1	All F	?	None	1 month after the 4th injection	All patients were free of urinary tract infection or	Primary end-point was the change of the O'Leary-Sant symptom score (OSS, including ICSI and ICPI) from		The results of this study demonstrates that intravesical injections of
Wu (2018)[30]	Taiwan	Prospective clinical trial	?	PRP	4	12 mL	Monthly	Intravesical	50 mL of the patient's whole blood	?	34	IC/BPS	53.8 ± 12.3	31/3	?	None	1 month after the 4th injection	?	O'Leary-Sant symptom (OSS), the IC symptom index (ICSI), and IC problem index (ICPI), pain score		Intravesical PRP injection is a possible effective treatment for medically
Lee (2018)[26]	Taiwan	Prospective clinical trial	?	PRP	4	12 mL	Monthly	Intravesical	50 mL of the patient's whole blood		40	IC/BPS	55.5 ± 11.1	37/3	?	None	1 and 3 months after the last injection	All the patients were free of infection and	GRA, OSS, VAS, bladder function and urodynamic measure		Repeated PRP injection is a safe, well-tolerated and sfae therapeutic
Medvedev (2023)[28]		Prospective RCT	?	PRP	5	?	Once in 2 weeks	intradetrusor	?	10 weeks	85	IC/BPS	20 to 79	All F	2.7 – 6.9	35 IC/BPS women received a	?	?	pain (VAS-scale), urgency and frequency (PUF-scale), bladder diary and bladder capacity (bladder		Standard IC / BPS therapy leads to a significant decrease in the

Table S2.SOF Table and GRADE Recommendations

Outcome	Importance	No. of Studies (Participants)	Quality of Evidence (GRADE)	Findings (MD [95% CI])	Interpretation
Urinary Frequency	Critical	7 (677)	**Low (⊕⊕⊖⊖) ↓**	-1.97 [-2.52, -1.42]	Likely reduces frequency, but uncontrolled studies weaken certainty.
Nocturia	Critical	6 (606)	**Low (⊕⊕⊖⊖) ↓**	-0.51 [-0.66, -0.36]	Likely reduces nocturia, but uncontrolled studies inflate effect.
Voided Volume	Important	5 (729)	**Very Low (⊕⊖⊖⊖) ↓↓**	15.36 [4.03, 26.69]	Unclear due to high heterogeneity and lack of controls.
PVR	Important	8 (779)	**Very Low (⊕⊖⊖⊖) ↓↓**	-16.87 [-26.51, -7.24]	Unclear due to inconsistency and bias.
Qmax	Important	8 (779)	**Very Low (⊕⊖⊖⊖) ↓↓**	5.21 [3.29, 7.14]	Unclear due to high heterogeneity and no control comparison.
FBC	Important	6 (716)	**Low (⊕⊕⊖⊖) ↓**	29.83 [18.05, 41.60]	Likely improves FBC, but uncontrolled studies limit certainty.
CBC	Important	5 (725)	**Very Low (⊕⊖⊖⊖) ↓↓**	0.18 [-15.61, 15.97]	No clear effect; very low confidence.
VAS (Pain)	Critical	8 (716)	**Low (⊕⊕⊖⊖) ↓**	-1.93 [-2.28, -1.58]	Likely reduces pain, but placebo effect cannot be ruled out.
OSS	Critical	6 (606)	**Low (⊕⊕⊖⊖) ↓**	-6.35 [-7.36, -5.33]	Likely improves symptoms, but bias is a concern.

ICSI	Important	5 (606)	**Low (⨁⨁◯◯) ⬇**	-4.24 [-6.47, -2.01]	Likely reduces symptoms, but uncontrolled studies weaken certainty.
ICPI	Important	5 (606)	**Low (⨁⨁◯◯) ⬇**	-3.09 [-3.88, -2.31]	Likely reduces pain, but placebo effect possible.