

Abstract no.: FP. 1-13

## Transurethral Seminal Vesiculoscopy for Seminal Tract Disorders: A Systematic Review and Meta-Analysis of Contemporary Evidence (2014-2024)

Chui Ka Lun

*Private Practice, Hong Kong*

### Objective

To systematically evaluate the efficacy and safety of transurethral seminal vesiculoscopy (TUSV) for seminal tract disorders through comprehensive meta-analysis of contemporary literature published between 2014-2024.

### Patients & Methods

Systematic literature search was conducted across PubMed, Google Scholar, and Web of Science databases. Inclusion criteria: peer-reviewed studies reporting TUSV outcomes with  $\geq 10$  patients and adequate follow-up data. Primary endpoints included technical success rates, symptom resolution, and complications. Meta-analysis employed random-effects models with pooled proportions and 95% confidence intervals (CI). Heterogeneity was assessed using  $I^2$  statistics. Quality assessment utilized Newcastle-Ottawa Scale.

### Results

Fifteen studies encompassing 1,247 patients from international centers were included. Primary indications were hematospermia (78.3%), seminal vesiculitis (18.7%), and ejaculatory duct obstruction (12.4%). Meta-analysis demonstrated pooled technical success rate of 92.1% (95% CI: 88.8%-95.5%,  $I^2=9.3\%$ ), symptom resolution rate of 93.3% (95% CI: 84.9%-100.0%,  $I^2=81.9\%$ ), and complication rate of 5.7% (95% CI: 1.5%-9.9%,  $I^2=0.0\%$ ). Complications were predominantly minor: transient painful ejaculation (2.8%) and epididymitis (1.4%). No serious complications were reported. Recurrence rates varied from 2.8%-32.4%.

Outcome	Rate (%)	95% CI	$I^2$ (%)
Technical Success	92.1	88.8-95.5	9.3
Symptom Resolution	93.3	84.9-100.0	81.9
Complications	5.7	1.5-9.9	0.0

### Conclusion

TUSV demonstrates excellent efficacy and safety for seminal tract disorders. These findings support TUSV as first-line intervention for patients with intractable hematospermia, seminal vesiculitis, or ejaculatory duct obstruction following failed conservative management. The procedure's favorable profile makes it suitable for Hong Kong urological practice.