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Article

Clinical Efficacy of F4.8 Visual Puncture Minirenal Mirror in the Treatment of Seminal Vesiculitis

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Abstract: Objective: To investigate the efficacy and safety of F4.8 visual puncture minirenal mirror in the treatment of seminal vesiculitis. Methods: A total of 60 patients with seminal vesiculitis admitted to the Department of Urology, Affiliated Hospital of Hebei University from July 2022 to July 2024 were selected as the study subjects. Patients treated with F4.8 visual puncture minirenal mirror were assigned to the minirenal mirror group (n = 30), while those treated with pharmacotherapy were assigned to the pharmacotherapy group (n = 30). The basic surgical conditions of the minirenal mirror group were analyzed, and the total effective rate at 3 months, as well as improvements in hematospermia, sexual function, pain symptoms, complications, and recurrence rates at 6 months post-treatment, were compared between the two groups. Results: The total effective rate and improvement in sexual function at 6 months post-treatment in the minirenal mirror group were significantly higher than those in the pharmacotherapy group ($p < 0.05$). The recurrence rate at 6 months post-treatment was lower in the minirenal mirror group than in the pharmacotherapy group ($p < 0.05$). No significant complications were observed in the pharmacotherapy group during follow-up. In the minirenal mirror group, 13 cases (43.33%) experienced mild hematuria postoperatively, 5 cases (16.67%) had perineal discomfort, and 1 case (3.33%) had fever. Conclusion: F4.8 visual puncture minirenal mirror is a reliable and safe treatment for seminal vesiculitis.

Keywords: seminal vesiculoscopy; minimally invasive technique; f4.8 visual puncture minirenal mirror; seminal vesiculitis; male urological diseases

1. Introduction

Seminal vesiculitis is a common male urological disease, characterized by symptoms such as hematospermia, dysuria, ejaculatory pain, and scrotal discomfort. Some patients experience recurrent symptoms due to delayed initial treatment, improper therapeutic measures, or persistent etiological factors, which may lead to infertility due to impaired semen quality and significantly affect the daily life and psychological state of patients [1]. Clinically, seminal vesiculitis is often treated conservatively with medications. However, with the advancement of medical technology, the minimally invasive technique of F4.8 visual puncture minirenal mirror has gradually been applied and promoted for the diagnosis and treatment of seminal vesiculitis [2]. This study included 60 patients with seminal vesiculitis to investigate the efficacy and safety of F4.8 visual puncture minirenal mirror in the treatment of seminal vesiculitis.

2. Materials and Methods

2.1. General Data

A total of 60 patients with seminal vesiculitis admitted to the Affiliated Hospital of Hebei University from July 2022 to July 2024 were enrolled in this study. They were divided into the minirenal mirror group (n = 30) and the pharmacotherapy group (n = 30) based on the treatment modality. The diagnostic criteria for seminal vesiculitis included: (1) hematuria in semen during ejaculation, nocturnal emission, or masturbation, accompanied by deep perineal pain or discomfort in the perineum, lower abdomen, and rectum; (2) significant pathological changes in the seminal vesicles detected by digital rectal examination; (3) a large number of white blood cells (WBC) and red blood cells in semen analysis; (4) significant pathological changes in the seminal vesicles detected by ultrasound or seminal vesiculography; (5) presence of bacteria or microorganisms in semen culture. Patients with items (1) and (3), along with at least one other item, were diagnosed with chronic seminal vesiculitis. Inclusion criteria were: (1) meeting the diagnostic criteria for chronic seminal vesiculitis; (2) age ranging from 18 to 75 years. Exclusion criteria included: (1) prostate diseases, chronic prostatitis, chronic pelvic pain syndrome, seminal vesicle tuberculosis, seminal vesicle tumors, or hematological diseases; (2) use of drugs inhibiting microvascular growth within 1 week. All patients and their families were informed and provided written consent. The study was approved by the Ethics Committee of the Affiliated Hospital of Hebei University.

2.2. Intervention Methods

2.2.1. Minirenal Mirror Group

Patients were placed in the lithotomy position under general intravenous anesthesia. A urinary catheter was first inserted. The F4.8 minirenal mirror was then inserted through the urethra into the bladder, followed by exploration of the bladder and ureters to check for any abnormal bleeding. The mirror was retracted to the verumontanum to inspect the prostate. Under ureteroscopic guidance, the location of the prostatic utricle and its opening were confirmed. After entering the prostatic utricle, the wall of the utricle was punctured or incised with a holmium laser to access the seminal vesicles. During the procedure, the presence and severity of obstruction, inflammatory changes, and bleeding points within the seminal vesicles were observed, and care was taken to avoid damage to the vas deferens. For patients with concomitant calculi, the stones were fragmented with a diode laser and flushed out. The seminal vesicles were then repeatedly irrigated with normal saline until no bloody fluid remained in the vesicular cavity. Finally, both seminal vesicles were thoroughly disinfected with diluted iodine solution (1:1). All patients in this group had a urinary catheter retained for 3 days postoperatively and received antibiotic therapy for infection prophylaxis.

2.2.2. Pharmacotherapy Group

Patients were administered Levofloxacin tablets (Zhejiang Prizer Pharmaceutical Co., Ltd., National Drug Approval No. H20213082, 0.5 g/tablet) orally at a dose of 1 tablet per day, and Rehmannia Six Formula granules (Guizhou Weimen Pharmaceutical Co., Ltd. (Guiyang, China), National Drug Approval No. Z52020383, 4 g/bag) orally at a dose of 1 bag three times daily for a total duration of 30 days.

2.3. Observation Indicators

2.3.1. Surgical Conditions of the Minirenal Mirror Group

Surgical time, hospital stay duration, and other surgical conditions were recorded for the minirenal mirror group.

2.3.2. Efficacy Evaluation

The therapeutic effects of both groups were compared at 3 months post-treatment. The efficacy criteria were as follows: (1) Cure: disappearance of hematospermia, scrotal discomfort, and other symptoms, with normalization of seminal vesicle size and WBC count in semen analysis; (2) Marked effectiveness: significant improvement in clinical symptoms such as hematospermia and scrotal discomfort, with a marked reduction in WBC count in semen analysis; (3) Improvement: mild improvement in clinical symptoms and a slight reduction in WBC count in semen analysis; (4) Ineffectiveness: no significant improvement in clinical symptoms or WBC count in semen analysis. The total effective rate was calculated as (number of cured cases + number of markedly effective cases + number of improved cases)/total number of cases × 100%.

2.3.3. Complications

The occurrence of complications such as hematuria, perineal discomfort, fever, urinary incontinence, retrograde ejaculation, epididymitis, and urethral stricture within 6 months post-treatment was compared between the two groups.

2.3.4. Follow-Up Results

Improvements in hematospermia, sexual dysfunction, and pain symptoms at 6 months post-treatment were compared between the two groups.

2.3.5. Recurrence Rate

The recurrence rate within 6 months post-treatment was compared between the two groups. The recurrence criteria included: (1) presence of hematospermia; (2) lower abdominal discomfort or perineal pain; (3) ultrasound findings of thickened seminal vesicle wall, rough edges, poor echogenicity within the vesicles, and vesicular dilation. The presence of two of these symptoms was defined as recurrence.

2.4. Recurrence Criteria

Currently, there is no unified standard for the recurrence of chronic seminal vesiculitis. Based on clinical diagnosis and treatment, recurrence was defined as the presence of the following two conditions: (1) hematospermia persisting at 6 months post-treatment; (2) lower abdominal or perineal pain and discomfort, with or without urinary irritative symptoms; (3) ultrasound findings of thickened seminal vesicle wall, vesicular dilation, rough edges, and poor echogenicity within the vesicles.

2.5. Statistical Methods

Data were analyzed using SPSS 22.0 software. Categorical data were expressed as cases (%) and analyzed using the chi-square ($\chi 2$) test. Continuous data were expressed as mean ± standard deviation ($x \pm s$) and analyzed using the independent samples t-test. A p-value of less than 0.05 was considered statistically significant.

3. Results

3.1. General Information

All patients had hematospermia before surgery. In the minirenal mirror group, the mean age was 39.30 ± 9.26 years, the mean duration of disease was 9.23 ± 2.43 months, the incidence of sexual dysfunction was 46.67%, and the incidence of pain was 80%. In the pharmacotherapy group, the mean age was 39.60 ± 3.63 years, the mean duration of disease was 9.53 ± 9.51 months, the incidence of sexual dysfunction was 43.33%, and the incidence of pain was 86.67%. There were no statistically significant differences between the two groups in terms of age, duration of disease, or comorbidities ($p > 0.05$) (as shown in Table 1).

Table 1. Comparison of General Characteristics between the Minirenal Mirror Group and the Pharmacotherapy Group.

Group.	N	Age (Years)	Duration (Months)	Incidence of Sexual Dysfunction	Incidence of Pain
minirenal mirror group	30	39.30 ± 9.26	9.23 ± 2.43	46.67%	80%
pharmacotherapy group	30	39.60 ± 3.63	9.53 ± 9.51	43.33%	86.67%
p		0.950	0.263	0.795	0.488

3.2. Comparison of Surgical Conditions in the Minirenal Mirror Group

All surgeries in the minirenal mirror group were successful, with a mean operative time of 50.97 ± 5.06 min and a mean hospital stay of 4.83 ± 1.02 days. The approach for endoscope insertion was through the perforation of the prostatic utricle. Among the patients, 24 cases showed inflammatory changes in the seminal vesicles, such as bleeding spots and mucosal congestion under the minirenal mirror; 2 cases had seminal vesicle cysts; and 12 cases had concomitant calculi (8 cases with stones in the prostatic utricle, 2 cases in the seminal vesicles, 1 case in the ejaculatory duct, and 1 case with stones in both the prostatic utricle and seminal vesicles). All stones were fragmented using holmium laser lithotripsy and subsequently flushed out.

3.3. Comparison of Clinical Efficacy between the Two Groups

The overall effective rate in the minirenal mirror group was 90.00% (15 cases cured, 7 cases with marked improvement, 5 cases improved, and 3 cases ineffective), while the overall effective rate in the pharmacotherapy group was 63.33% (6 cases cured, 9 cases with marked improvement, 4 cases improved, and 11 cases ineffective). The overall effective rate in the minirenal mirror group was significantly higher than that in the pharmacotherapy group, with a statistically significant difference ($p < 0.05$) (as shown in Table 2).

Table 2. Comparison of Clinical Efficacy between the Minirenal Mirror Group and the Pharmacotherapy Group.

Group	N	Cured	Markedly Effective	Effective	Ineffective	The Overall Effective Rate
minirenal mirror group	30	15 (50.00%)	7 (23.33%)	5 (16.67%)	3 (10.00%)	90.00%
pharmacotherapy group	30	6 (20.00%)	9 (30.00%)	4 (13.33%)	11 (36.67%)	63.33%
χ^2						5.057
p						0.015

3.4. Comparison of Complications

Within 6 months postoperatively, no significant complications were observed in the pharmacotherapy group. In the minirenal mirror group, 16 cases (53.33%) experienced mild hematuria postoperatively, which resolved spontaneously within 2 weeks; 6 cases (20.00%) had perineal discomfort, which significantly improved after local warm compresses; and 1 case (3.33%) had mild fever, which normalized after treatment. No cases of urinary incontinence, retrograde ejaculation, epididymitis, or urethral stricture were observed in the minirenal mirror group during the follow-up period.

3.5. Comparison of Follow-Up Results

35.1. Comparison of Hematospermia Improvement between the Two Groups

In the minirenal mirror group, hematospermia disappeared in 26 cases and improved in 4 cases, with a total improvement rate of 100.00%. In the pharmacotherapy group, hematospermia disappeared in 6 cases and improved in 18 cases, with a total improvement rate of 80.00%. The improvement rate of hematospermia in the minirenal mirror group was significantly higher than that in the pharmacotherapy group, with a statistically significant difference ($p < 0.05$) (as shown in Table 3).

Table 3. Comparison of Hematospermia Improvement between the Minirenal Mirror Group and the Pharmacotherapy Group.

Group	N	Hematospermia Resolved	Hematospermia Improved	Total Improvement Rate
minirenal mirror group	30	26 (86.67%)	4 (13.33%)	100.00%
pharmacotherapy group	30	6 (20.00%)	14 (60.00%)	80.00%
χ^2				4.630
p				0.031

3.5.2. Comparison of Sexual Dysfunction Improvement between the Two Groups

In the minirenal mirror group, among the 14 patients with sexual dysfunction, 4 cases returned to normal and 10 cases improved, resulting in a total improvement rate of sexual dysfunction of 100%. In the pharmacotherapy group, among the 13 patients with sexual dysfunction, 2 cases returned to normal and 5 cases improved, resulting in a total improvement rate of 53.85%. The improvement rate of sexual dysfunction in the minirenal mirror group was significantly higher than that in the pharmacotherapy group, with a statistically significant difference ($p < 0.05$) (as shown in Table 4).

Table 4. Comparison of Sexual Dysfunction Improvement between the Minirenal Mirror Group and the Pharmacotherapy Group.

Group	N	Returned to Normal	Improved	Total Improvement Rate
minirenal mirror group	14	4 (28.57%)	10 (71.43%)	100.00%
pharmacotherapy group	13	2 (15.38%)	5 (53.85%)	53.85%
χ^2				5.852
p				0.016

3.5.3. Comparison of Pain Symptom Improvement between the Two Groups

In the minirenal mirror group, among the 24 patients with pain symptoms, 13 cases returned to normal and 11 cases improved, resulting in a total improvement rate of pain symptoms of 100%. In the pharmacotherapy group, among the 26 patients with pain symptoms, 8 cases returned to normal and 11 cases improved, resulting in a total improvement rate of 73.08%. The improvement rate of pain symptoms in the minirenal mirror group was significantly higher than that in the pharmacotherapy group, with a statistically significant difference ($p < 0.05$) (as shown in Table 5).

Table 5. Comparison of Pain Symptom Improvement between the Minirenal Mirror Group and the Pharmacotherapy Group.

Group	N	Returned to Normal	Improved	Total Improvement Rate
minirenal mirror group	24	13 (28.57%)	11 (71.43%)	100.00%
pharmacotherapy group	26	8 (15.38%)	11 (42.31%)	73.08%
χ^2				5.444
p				0.020

3.6. Comparison of Recurrence Rates

Within 6 months of follow-up, 5 cases (16.67%) of recurrence were observed in the minirenal mirror group, while 13 cases (43.33%) were observed in the pharmacotherapy group. The recurrence rate in the minirenal mirror group was significantly lower than that in the pharmacotherapy group, with a statistically significant difference ($p < 0.05$) (as shown in Table 6).

Table 6. Comparison of Recurrence Rates between the Minirenal Mirror Group and the Pharmacotherapy Group.

Group	N	Recurrence	No Recurrence	Recurrence Rate
minirenal mirror group	30	5 (28.57%)	25 (71.43%)	16.67%
pharmacotherapy group	30	13 (15.38%)	17 (53.85%)	43.33%
χ^2				5.079
p				0.024

4. Discussion

The seminal vesicles, also known as the seminal glands, are a pair of elongated, oval-shaped, sac-like glands located laterally to the ampulla of the vas deferens, at the base of the bladder. They are positioned on both the left and right sides, with a wider upper portion and a narrower lower portion, slightly flattened on each side, and closely adherent to the posterior aspect of the prostate. Due to their deep anatomical location between the ampulla of the vas deferens and the rectum, and their rich mucosal folds, the seminal vesicles are prone to pathogen invasion, leading to retrograde infections. These infections can subsequently affect ejaculation, fertility, and urinary function [3]. Studies have shown that frequent sexual activity, excessive alcohol consumption, and exposure to cold can cause congestion in the seminal vesicles. If pathogens invade during this state, seminal vesiculitis may develop [4].

Clinically, seminal vesiculitis is generally curable through conservative treatment. However, due to the poor blood supply and complex anatomy of the seminal vesicles, the efficacy of pharmacological or physical therapies is often limited, resulting in incomplete treatment and prolonged illness. This can impose a significant psychological burden on patients [5]. Moreover, recurrent episodes of seminal vesiculitis may increase the risk of malignant transformations, such as tumors.

In recent years, with the rapid development of endoscopic techniques, the F4.8 visual puncture minirenal mirror, often used as a seminal vesiculoscope, has been widely applied in clinical practice. It has become an important diagnostic and therapeutic tool for seminal vesiculitis and other male urological diseases, and is now considered one of the key technologies in the field of andrology.

The results of this study indicate that the minirenal mirror group achieved significantly better outcomes in the treatment of seminal vesiculitis compared to the pharmacotherapy group. This may be attributed to the fact that pharmacotherapy cannot directly target the lesion site. Additionally, the poor blood supply to the seminal vesicles results in low drug concentrations at the affected areas, thereby reducing the clearance rate of inflammation [6]. Moreover, in some patients, seminal vesiculitis may be caused by other underlying conditions such as seminal vesicle cysts or calculi. These etiologies cannot be identified through pharmacotherapy alone,

which subsequently affects the effectiveness of treatment. In contrast, the minimally invasive technique of seminal vesiculoscopy allows surgeons to directly visualize and examine the ejaculatory ducts and seminal vesicles, identify the underlying causes, and implement targeted treatments. For instance, in cases of seminal vesiculitis, antibiotics can be directly instilled into the vesicles for irrigation. For patients with concomitant calculi, holmium laser lithotripsy and irrigation can be performed. In cases of seminal vesicle cysts, a cystostomy can be conducted to achieve precise treatment and improve efficacy [7]. In this study, patients in the minirenal mirror group exhibited significantly higher improvement rates in hematospermia and sexual dysfunction at 6 months post-treatment compared to the pharmacotherapy group. This finding further confirms the significant advantages of seminal vesiculoscopy in the treatment of seminal vesiculitis.

During the treatment process with the F4.8 minirenal mirror, particular attention should be paid to the following: First, gentle manipulation during surgery is essential to avoid complications such as bleeding and rectal injury. Second, given the close anatomical relationship between the ejaculatory duct lumen and the lateral posterior wall of the prostatic utricle, a guidewire is typically used to perforate the utricular wall before inserting the seminal vesiculoscope. Mastery of ureteroscopic techniques is crucial for the success of the procedure. During surgery, gentle handling is required to prevent damage to the seminal vesicles, rectum, verumontanum, and ejaculatory ducts. Third, excessive irrigation pressure should be avoided during the procedure; maintaining a clear field of view is sufficient. Excessive pressure can cause secondary bleeding in the already congested mucosa, exacerbating local inflammation. Moreover, high-pressure irrigation may force bacteria from the seminal vesicles into the ejaculatory ducts, lymphatic system, and venous system, potentially leading to postoperative infections. In our case series, one patient developed a fever postoperatively, which was likely due to excessive irrigation pressure causing bacterial retrograde flow into the ejaculatory ducts. Therefore, meticulous and gentle surgical techniques are essential for the successful implementation of minimally invasive seminal vesiculoscopy [8].

The F4.8 minirenal mirror has provided an efficient diagnostic and therapeutic approach for distal genitourinary tract diseases that were previously difficult to manage. It is characterized by fewer complications, better prognosis, and lower recurrence rates [9]. Yang et al. [10] first demonstrated the safety and feasibility of endoscopic procedures via natural orifices. Liao et al. [11] treated 216 patients with hematospermia using a Fr6.5 rigid ureteroscope and found that 94.2% (178/189) of patients experienced resolution of hematospermia without postoperative complications. This further confirmed the safety, efficacy, and significant long-term therapeutic outcomes of seminal vesiculoscopy. However, due to its relatively recent emergence, a unified consensus on the diagnosis and treatment of this technique has yet to be established internationally. Additionally, the technique has a steep learning curve. Beginners may face challenges such as difficulties in endoscope insertion, leading to failed seminal vesiculoscopy and increased risks of intraoperative and postoperative complications [12–16]. In summary, as an emerging technology, seminal vesiculoscopy requires further development and refinement. During this period, it is essential for experts and scholars in the field of urology and andrology to pay more attention to this technique and actively engage in multicenter collaborative studies to promote its development and improvement.

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Conflicts of Interest

The authors declare no conflict of interest.

Reference

1. Zou F, Zhang GF, Zhang WS, *et al*. Clinical Efficacy of MRI-Guided Seminal Vesicle Puncture Using F4.8 Visual Minirenal Mirror for the Treatment of Seminal Vesicle Diseases. *Chinese Journal of New Clinical Medicine* 2024; **17**(**8**): 891–895.
2. Zhu GY, Zhang ZG, Zhang WD, *et al*. Anatomical Characteristics of the Seminal Vesicles and Their Significance in Clinical Endoscopic Surgery. *Chinese Journal of Andrology* 2018; **24**(**9**): 802–806.
3. Wang YF, Tang H, Chen J, *et al*. Application and Safety of Minimally Invasive Seminal Vesiculoscopy in the Treatment of Seminal Vesiculitis. *Chinese Journal of Sexual Science* 2021; **30**(**6**): 29–32.
4. Wang XL, Zang DW, Zheng LW. Clinical Study on the Treatment of Chronic Hematospermia with "Tonifying Qi and Promoting Blood Circulation" method. *Chinese Journal of Sexual Science* 2018; **27**(**12**): 120–122.
5. Wang CY, Zhang KQ, Zhu QQ, *et al*. Nursing Experience of Seminal Vesiculoscopy for Severe Refractory Hematospermia. *Chinese Medical Herald* 2014; **9**(**23**): 120–123.
6. Li SP, Cai JT, Xu ZP, *et al*. Clinical Comparative Study of Seminal Vesiculoscopy and Pharmacotherapy for Chronic Seminal Vesiculitis. *Journal of Modern Urology* 2015; **20**(**2**): 93–95.
7. Jin FS, Li YF. Seminal Vesiculoscopy for the Diagnosis and Treatment of Hematospermia and Ejaculatory Duct Obstruction. *Journal of Clinical Urology* 2015; **30**(**1**): 1–5.
8. Chai KQ, Zhao Q, Gao ZM, *et al*. Experience in the Application of Seminal Vesiculoscopy for the Diagnosis and Treatment of Seminal Vesicle Diseases. *Gansu Medical Journal* 2017; **36**(**3**): 223–224.
9. Xie HD, Jiang T, Wang KN, *et al*. Diagnostic and Therapeutic Value of Seminal Vesiculoscopy for Distal Genitourinary Tract Diseases. *Chinese Journal of Sexual Science* 2018; **27**(**8**): 38–42.
10. Yang SC, Rha KH, Byon SK, *et al*. Transutricular Seminal Vesiculoscopy. *Journal of Endourology* 2002; 16(6): 343–345.
11. Liao LG, Li YF, Zhu T, *et al*. Clinical Analysis of Endoscopic Treatment for Refractory Hematospermia in 216 cases. *Journal of Clinical Urology* 2017; (**1**): 26–31.
12. Zhu XB, Zhang XS, Zhang SL, *et al*. 8.5/11.5F Transurethral Seminal Vesiculoscopy in the Diagnosis and Treatment of Refractory Hematospermia. *Zhonghua Nan Ke Xue* 2016; **22**(**3**): 225–228.
13. Zhao J, Zhai XQ, Li HC, *et al*. Seminal Vesiculoscopy in the Treatment of Refractory Hemospermia and Ejaculatory Duct Obstruction. *Zhonghua Nan Ke Xue* 2016; **22**(**7**): 630–634.
14. Li BJ, Zhang C, Li K, *et al*. Clinical Analysis of the Characterization of Magnetic Resonance Imaging in 102 Cases of Refractory Haematospermia. *Andrology* 2013; **1**(**6**): 948–956.
15. Han CH, Liang Q, Dong BZ, *et al*. The Transurethral Seminal Vesiculoscopy in the Diagnosis and Treatment of the Seminal Vesicle Disease. *Cell Biochemistry and Biophysics* 2013; **66**(**3**): 851–853.
16. Guo JN, Li H, Hu ZD, *et al*. Clinicopathological Features of Primary Seminal Vesicle Adenocarcinoma: A Report of 4 Cases and Review of the Literature. *Zhonghua Nan Ke Xue* 2017; **7**(**23**): 639–645.