Clinical Studies on Postcoital Hematuria

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Purpose: A study was conducted to evaluate the clinical characteristics of patients with postcoital hematuria without bloody ejaculate.
Materials and Methods: The records of 21 men (mean age 48.6 years, range 27-64 years) with isolated postcoital hematuria without bloody ejaculate were retrospectively reviewed. Patients underwent routine laboratory testing including coagulation studies and urological evaluation which included urinalysis, urine cytology, abdominal and transrectal ultrasonography, and cystourethroscopy.
Results: Among total 21 patients, there were no detectable abnormalities in 11 (52.4%) patients. Lesions were found in 10 (47.6%) patients, which included 1 pathologically proven prostatic urethral hemangioma, 5 benign prostatic hyperplasia, 1 bladder neck obstruction, and 3 ultrasonographically identified seminal vesicle dilatation. In 19 (90.5%) patients, symptom subsided after treatment or simple observation without recurrences. In the remaining two patients, postcoital hematuria has still persisted intermittently.
Conclusions: Thorough evaluations are necessary in the case of postcoital hematuria as treatable lesions could be identified. In cases without identifiable causes, the patients could be reassured that the condition is benign and self-limiting. **(Korean J Urol 2008;49:262-265)**

Key Words: Hematuria, Coitus

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INTRODUCTION

Hemospermia or bloody ejaculate is not an uncommon urologic symptom. Because hemospermia is usually intermittent, benign and self-limited, it usually requires no intensive clinical investigation. It can manifest alone or together with other urologic symptoms such as hematuria. Hematuria was reported to occur in 3-20% of patients with hemospermia, without mention of hematuria being associated with ejaculation or not.[1-4] Hemospermia associated with postcoital or postejaculation hematuria has uncommonly been reported.[5-8] Isolated postcoital or postejaculation hematuria without bloody ejaculate is distinct from hemospermia and only 8 cases reported in the literature.[9-15]

Because isolated postcoital hematuria without bloody ejaculate is rare and little is known about its pathogenesis, treatment and prognosis, we evaluated the clinical characteristics of those patients.

PATIENTS AND METHODS

Between December 1995 and August 2007, 21 men (mean age 48.6 years, range 27-64 years) with postcoital hematuria without bloody ejaculate presented to our Department. In these patients, gross hematuria appeared only in the first one or two voided urine just after sexual intercourse without persistent gross hematuria afterwards in the usual conditions. All patients denied the presence of concomitant bloody ejaculate when they were specifically questioned. The records of the patients were retrospectively reviewed.

Patients underwent routine laboratory testing including coagulation studies and urological evaluation which included urinalysis, urine cytology, abdominal and transrectal ultra-

sonography, and cystourethroscopy. Clinical history about the duration of symptom before the first visit, duration of symptom persisted after the first visit, and accompanying systemic diseases was also reviewed.

RESULTS

Clinical characteristics of the patients with postcoital hematuria without bloody ejaculate are summarized in Table 1. The interval between the first episode of postcoital hematuria and the first visit to the hospital varied from 1 day to 15 years, but 14 (66.7%) of the patients were seen within 1 month of the initial symptom. With regard to the systemic diseases, 1 patient (patient no. 10) had diabetes mellitus and 2 patients (patient no. 11, 12) had hypertension. Nobody had coagulopathy or had used anticoagulants. No one had tender prostate on digital rectal examination.

Among total 21 patients, there were no detectable abnormalities in 11 (52.4%) patients. Lesions were found in 10 (47.6%) patients, which included 1 pathologically proven prostatic urethral hemangioma, 5 benign prostatic hyperplasia, 1 bladder neck obstruction, and 3 ultrasonographically identified seminal vesicle dilatation. In a case with prostatic urethral hemangioma, transurethral resection and fulguration were performed. In patients with benign prostatic hyperplasia and bladder neck obstruction, α-blocker and/or finasteride were administered. In patients with seminal vesicle dilatation, antibiotic administration or simple observation was done. Expressed prostatic secretion was normal in these patients. In 11 patients without any identifiable abnormalities, antibiotic was administered empirically or simply observed.

The symptom subsided within 3 months in 18 (85.7%) patients, and within 1 year in 1 patient. In these patients, the symptom did not recur at the mean follow-up period of 44.9 months (10-120). In the remaining two patients, postcoital hematuria has still persisted intermittently for 19 and 74 months, respectively, since the first visit. Magnetic resonance imaging was performed in the latter patient and revealed no abnormal findings.

Table 1. Characteristics of patients with postcoital hematuria without bloody ejaculate

Patient No.	Age (years)	Symptom duration (months)	Identified lesions	Treatment	Persistence of symptom after first visit (months)	Follow-up (months)
1	50	1	Seminal vesicle dilatation	Observation	1	12
2	36	7	−	Antibiotic	1	28
3*	50	180	−	Antibiotic, α-blocker	74	74
4	53	1/4	BPH	α-blocker, finasteride	1	33
5	48	3	BPH	α-blocker, finasteride	1	41
6	47	1	Prostatic urethral hemangioma	TUR	2	11
7	63	2	−	Observation	1	17
8	46	12	−	Antibiotic	12	36
9	46	1/4	BNO	α-blocker	3	38
10	61	1	−	Observation	1	21
11	55	3/4	Seminal vesicle dilatation	Observation	1	27
12	55	1/4	BPH	Finasteride	3	18
13	63	1/4	−	Antibiotic	1	18
14	47	1/30	−	Observation	−	108
15	27	1/4	−	Observation	1/10	120
16	38	1/30	−	Observation	−	120
17	53	12	−	Observation	2	96
18	46	1/30	Seminal vesicle dilatation	Antibiotic	1/4	72
19*	34	36	−	Antibiotic	19	19
20	38	1/2	BPH	α-blocker	−	10
21	64	1/4	BPH	α-blocker, finasteride	−	28

*Symptom still persists in these cases, BPH: benign prostatic hyperplasia, BNO: bladder neck obstruction, TUR: transurethral resection.

DISCUSSION

Isolated postcoital or postejaculation hematuria without bloody ejaculate is rare and only 8 cases could be found in the literature.[9-15] Causes were variable with 1 varix of posterior urethra,[9] 1 prostatic utricular papilloma,[10] 2 prostatic urethral adenomas,[11] and 1 urethral polyp,[12] which were treated with transurethral resection and/or electric coagulation or fulguration using holmium:YAG laser. Kumar et al.[12] thought that the cause of postcoital hematuria in urethral polyp might be due to the vascular smooth muscular response to the changes in autonomic innervation during the ejaculation supplemented by the increased blood flow and increased pressure generated in the posterior urethra due to the closure of the bladder neck. It was suggested that the diagnosis could be aided by having the patient present for examination immediately after ejaculation.[9]

Hong et al.[13] reported a case with periprostatic arteriovenous malformation as the cause of postejaculation hematuria, which was treated by angiographic embolization. They suggested that transrectal color Doppler ultrasonography would be helpful as the initial, noninvasive study for postejaculation hematuria to evaluate vascular anomalies.

Tsui et al.[14] reported a case with massive hematuria, after the onset of erection, from left internal pudendal and obturator arteries, which was treated with embolotherapy. They thought that the cause of hematuria might be due to the pseudoaneurysm created at the time of blunt trauma during sexual intercourse.

Chen et al.[15] reported a case with benign prostatic hyperplasia as the cause of postcoital hematuria. They thought that the spontaneous prostatic bleeding was related to the increased vascularity within the hyperplastic prostatic tissues and abnormal friable prostatic tissues exposed in the prostatic urethra. During emission and ejaculation, the increased sympathetic tone, contraction of prostatic smooth muscles and closure of the bladder neck would significantly increase prostatic urethral pressure, which might lead to the rupture of the friable vessels of the prostate.

However, because postcoital or postejaculation hematuria without bloody ejaculate is rare, little is known about the mechanism of this type of hematuria.

In our cases, lesions were found in 10 (47.6%) out of 21 patients, including prostatic urethral hemangioma, benign prostatic hyperplasia, bladder neck obstruction, and seminal vesicle dilatation.

In a case with prostatic urethral hemangioma, postcoital hematuria subsided after transurethral resection and fulguration without recurrences.

5α-reductase inhibitors, such as finasteride and dutasteride, appear to be effective in treating hematuria associated with benign prostatic hyperplasia, because 5α-reductase inhibitors decrease the activity of androgen-controlled growth factors responsible for angiogenesis, thereby leading to reduced prostatic bleeding.[15-19] Therefore, 5α-reductase inhibitors might be helpful in controlling postcoital hematuria in cases with benign prostatic hyperplasia, which was shown in our cases and the case reported by Chen et al.[15]

In 3 patients with seminal vesicle dilatation diagnosed by transrectal ultrasonography, antibiotic administration or simple observation was done. Expressed prostatic secretion was normal in these patients. Postcoital hematuria subsided and did not recur during the follow-up period.

It is not certain whether the identified lesions in our cases were really the causes of hematuria, except the urethral hemangioma. Particularly, in the patients with seminal vesicle dilatation, the association is uncertain, because if the seminal vesicle dilatation were the cause of hematuria, it would probably have been accompanied by hemospermia.[20] It might be just the coincidental finding with no relation to the postcoital hematuria. It seems that the most probable lesion will be in the urethra because the blood flow in the urethra will be increased during erection and the hemangioma or the dilated vein in the urethra could be easily ruptured to bleed. If the urethral lesion was not found, the diagnosis might be aided by having the patient present for examination immediately after ejaculation as Redman and Young[9] suggested.

Because the symptom subsided without recurrences for a long period after appropriate treatment or simple observation in the majority of cases, postcoital hematuria usually seems to be benign and self-limiting as in cases with hemospermia.

CONCLUSIONS

Thorough evaluations are necessary in the case of postcoital hematuria because treatable lesions such as urethral hemangioma could be found. The symptom did not recur for a long period after remission in the majority of patients.

Therefore, in cases without identifiable causes, the patients could be reassured that the condition is benign and self-limiting.

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