Urothelial Carcinoma Presenting as Single Episode of Haematospermia: A Case Report and Review of Literature

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Abstract

Background:
Some people are of the opinion that single episodes of haematospermia should not be thoroughly investigated because usually no significant pathology is found. This attitude towards single episodes of haematospermia may leave some patients with treatable pathology undiagnosed for a considerable length of time and could be considered by others a negligent attitude if the pathology is subsequently diagnosed.

Aims:
To report a case of transitional cell carcinoma of the urinary bladder diagnosed during investigation of a single episode of haematospermia.
To review the literature on haematospermia

Case Report:
A 32-years-old man was referred because of a single episode of haematospermia. His investigations including: urine microscopy and culture; urine cytology; full blood count; ultrasound scan of the urinary tract were normal. He had flexible cystoscopy which revealed a 5 mm papillary tumour in his urinary bladder. He underwent trans-urethral resection of the bladder tumour; histological examination revealed a well differentiated papillary without any evidence of invasion. He underwent flexible review cystoscopies at 3 monthly intervals for a year which revealed no evidence of recurrence.

Discussion:
There is evidence in the literature to suggest that:
(a) Episodes of haematospermia in patients less than 40 years old are usually benign.
(b) Malignancies occur in 2% of cases of haematospermia
(c) There is a school of thought with the opinion that single episodes of haematospermia should be treated in the community without the need for ultrasound scan of the urinary tract or cystoscopy.

Conclusions:
The finding of a papillary transitional cell carcinoma of the urinary bladder in a 32-years-old man with a single episode of haematospermia should make all practitioners weigh the pros and cons of full investigation of patients with single episodes of haematospermia.

Decision whether or not to investigate a single episode of haematospermia should be taken based upon other aspects of the patient’s history (This patient is a smoker).

It is the author’s opinion that every patient with a single episode of haematospermia should be investigated fully and quickly and if no pathology is found the patient can be discharged. This is the only way one can quickly diagnose any pathology that the patient may have. Rarity of pathology should not provide the chance for any practitioner to miss the early diagnosis of a potentially treatable condition by not fully investigating single episodes of haematospermia.

Introduction

Haematospermia can be lead to anxiety in most patients. It has been suggested that single episodes of haematospermia in young men less than 40 years old is usually benign and that patients with single episodes of haematospermia should treated in the community and not investigated. If this approach is universally adopted there is a danger that the diagnosis of potentially treatable conditions may be missed or delayed. A case of transitional carcinoma of the urinary bladder diagnosed during investigation of a single episode of haematospermia is reported.

Case Report

A 32-years-old man was referred because of one episode of haematospermia. He also had slight post micturition dribbling. He was asymptomatic otherwise.

He had been smoking 10 cigarettes a day until 3 months prior to his referral.

His general and systematic examinations were normal including digital rectal examination. His investigations including full blood count, serum urea and electrolytes, urine microscopy and culture as well as urine cytology were normal. He had ultrasound scan of the urinary tract which did not reveal any abnormality (see
Hematospermia has been written about for centuries. Comments on hematospermia have been made by Hippocrates, Galen, Pares, Morgagni and Fournier. The first American report was published in 1894[1] by Hugues and in his review Hugues noted that Hippocrates, Pares, Morgagni, Velpeau, Fournier and Guyon had all seen cases of hematospermia. Other authors had also reported cases of hematospermia (Dermaquary 1865 [2], Guelliot 1882 [3], Keersmecker 1899 [4]. Pursuant to this Fletcher [5], Leary [6], Marshall [7], and Ganabathi [8] have published reviews on the subject.

The real prevalence of hematospermia is not known due to the fact that most ejaculations occur intravaginally and often hematospermia remains unnoticed [Schiff 9]. Hematospermia can occur in men of any age. It has been suggested that in younger men (≤40 years), hematospermia is uniformly benign [Schiff 9].

Hematospermia is quite often associated with inflammatory conditions of the seminal vesicle or prostate. Hematospermia is most often self-limited and resolves within one to two months. In about half the cases of hematospermia, the aetiology is declared idiopathic.

Some of the conditions which have been reported to account for hematospermia include conditions of the prostate; conditions of the urethra; seminal vesicle lesions; and infections:

- Conditions of the prostate

The most common aetiology is prostate biopsy which produces self-limited hematospermia which usually resolves within about a month. Recent data which was collected after TRUS-guided biopsy indicated that up to 36.3% of men undergoing 6-15 cores develop post-procedure hematospermia; increasing the number of cores did not significantly increase the frequency of hematospermia [10].

In one case series, prostatitis was stated as the aetiology in 30% of the patients [9]. Some authors have identified prostatic carcinoma as an aetiologic factor. It has been stated that malignancies account for 2% of cases of hematospermia [9]. It was also stated that in a long-term study which included 150 patients with hemato-spermia, only 6 patients in the end developed prostatic carcinoma and none had prostatic carcinoma diagnosed during the initial evaluation [9].

Nevertheless, Han and associates [11] found a significantly increased risk of prostatic cancer in men with hematospermia. Nineteen of their patients (13.7%) were diagnosed with prostate cancer. Within the overall cohort of 26,126 patients, the detection rate of prostate cancer 6.5%. Logistic regression analysis in this study revealed that the presence of hematospermia was a significant predictor of prostate cancer diagnosis [11]. There is no consensus of opinion support for this observation. Prando (2008) found prostate cancer in only one out of 86 men with hematospermia [12].

A number of centres have reviewed their experience with hematospermia complicating TRUSS-guided prostate biopsy. The rate of hematospermia complicating trans-rectal prostate biopsy has varied between 9 and 45% [9]. Twenty five percent of patients who underwent TRUSS biopsy of prostate had concomitant hematospermia and haematuria. Berger and associates [10] in 2004 reported on 5957 biopsies performed in 4303 men. They found that hemato-spermia occurred following about 36% of the biopsies. They concluded that in this situation, the hematospermia is self-limited generally and requires no specific therapy [10].

Shen and associates [13] reported hematospermia which occurred in 2.5% of 80 consecutive men who underwent trans-urethral resection of prostate. Brachytherapy as treatment of prostate cancer has been shown to cause hematospermia in up to 17% of patients who undergo this treatment modality [14].

Cystic dilatation of the prostatic utricle has been reported in association with hematospermia. Furuya and Kato [15] reported on 30 of 138 men with hematospermia who had midline cysts of the prostate. Nineteen men underwent trans-perineal biopsy and
hemorrhagic fluid was confirmed in 13 of the men. Four of the men were cured with trans-urethral unroofing [15]. Etherington and associates [16] found a significant number of patients with prostatic calculi in a study of 52 patients with hematospermia. Hematospermia may also be caused by prostatic varices and telangectasia. In rare cases a patient with hematospermia may be diagnosed with prostatic varices only after cystoscopic examination while experiencing an erection. It has been recommended that in order to diagnose this condition, flexible (preferably) or rigid cystoscopy should be conducted after pharmacological induction of erection [9]. Wilson and associates [17] reported the results of a ten year single institution retrospective study of patients presenting with haematospermia to establish standard tests for investigation and what tests have low yield. They concluded that a single episode of haematuria is usually benign; flexible cystoscopy and abdominal ultrasound appear valueless; assessment should consist of clinical examination (including testicular), Digital rectal examination and serum PSA testing; it can safely be managed in the community and only referred in the presence of abnormal examination, elevated PSA or recurrent episodes of haematospermia.

This patient had a single episode of haematospermia but was referred to the urologist. Flexible cystoscopy revealed a papillary bladder tumour which was resected. If this patient had not had ultrasound scan of renal tract and flexible cystoscopy his transitional cell carcinoma of the bladder would have been missed.

Conclusions

Even though some people would argue that it would not be cost-effective to subject patients with single episodes of haematospermia to flexible cystoscopy, It would be argued that the finding of urothelial carcinoma in the investigation of this patient would justify full investigation of patients with single episodes of haematospermia including flexible cystoscopy and ultrasound scan of the urinary tract. If this patient had not been fully investigated his bladder tumour would have been missed.

It would be suggested to those who are of the opinion that patients with single episodes of haematospermia should not be subjected to flexible cystoscopy there should be an exception to this guideline which should state that a patient with a single episode of haematospermia who is a smoker should have a flexible cystoscopy to exclude a bladder tumour.

Decision whether or not to investigate a single episode of haematospermia should be taken based upon other aspects of the patient's history.

Young patients with haematospermia can also have bladder tumours.

References


Illustrations

Illustration 1

Ultrasound scan showing a normal full bladder without any ultrasound scan evidence of a lesion in the urinary bladder
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