Research Article

Diagnosis and therapeutic aspects of hematospermia: cross sectional survey

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Date Submitted:14.5.2010

Date Accepted:29.12.2010

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Abstract

Aims: to investigate hematospermia & study its clinical significance.
Patients & methods: a prospective study was carried out on 31 patients with hematospermia at Al-Yermouk Teaching Hospital between January 2007 & January 2009. All patients were clinically assessed & subjected to urinalysis & seminal fluid analysis. Other investigations were done according to individual cases. More than 90% of the patients had no prior genitourinary symptoms or significant factors in their history.
Results: The etiology of hematospermia was determined & found to be of inflammatory and infective origin in most men especially the young. In 3 of the 31 patients studied, hematuria occurred with hematospermia & was associated with significant lower urinary tract abnormalities such as bladder tumor, however in none of these a relationship appeared between hematospermia & the disease process.
Conclusions: From this study we can conclude that hematospermia is of no importance, does not progress, tend to disappear in the course of time & rarely is associated with any significant urologic pathology.

Keywords: hematospermia, prostatitis, urethritis

INTRODUCTION

Hematospermia (the presence of blood in the ejaculate) while often perceived as a symptom of little significance, it can provokes great anxiety in men who experience it. [1] It may affect men of any age after puberty, but its peak incidence is in men 30 to 40 years old. It may be caused by a variety of pathologic entities including inflammatory & neoplastic disorders of the genital & lower urinary tracts.[2, 3]

Inflammatory disorders are the most frequent cause, particularly in the younger age-group, but unsuspected neoplasia may occur in older men & account for a very small percentage of hematospermic diagnoses.[4]

Imaging evaluation of patients with recurrent hemospermia is usually performed by transrectal ultrasound (TRUS).[5, 6] In contrast to TRUS, endorectal magnetic resonance imaging (E-MRI) has the ability to identify hemorrhage within the reproductive structures, but despite its superior diagnostic capability there are only few reports describing its utility in the assessment of persistent hemospermia.[7, 8]

In most patients, hematospermia is usually benign, self-limited & requires no further diagnostic workup.[9]

PATIENTS AND METHODS

Between January 2007 & January 2009, 31 patients with hematospermia were seen at Al-Yermouk Teaching Hospital.

A detailed history and general physical examination including genital, digital rectal prostatic palpation, blood

pressure measurement, urinalysis and seminal fluid analysis were performed on all patients. Of these, 23 patients had no additional urologic evaluation. In the remaining 8 patients, other investigations including urine cytology, serum prostate specific antigen (S. PSA), KUB Roentgenogram, TRUS & cystoscopy were done according to individual cases.

RESULTS

Hematospermia occurred in 31 patients with ages ranging from 19 to 56 years (average 32 years). Of the patients studied, (16%) had a single episode of hematospermia & the remaining (84%) had repeated episodes over periods of weeks to few months.

More than (90%) of our patients had no prior genitourinary symptoms or significant factors in their history.

Significant coexisting disease was present in 3 of our patients; 1 had diabetes mellitus & the other 2 had hypertension.

The cause of hematospermia was determined in the patients, inflammatory and infective pathologies accounted for the bleeding in most men (especially the young), where it was due to posterior urethritis, prostatitis or seminal vesiculitis. In most cases the bleeding was slight, self-limited and required only simple investigations and appropriate treatment.

Hematuria occurred with hematospermia in 3 of the 31 patients but was not a prominent symptom and was associated with lower urinary tract abnormalities; 2 patients were found to have benign prostatic hyperplasia & 1 patient had bladder tumor. The results of urologic evaluation in our patients are listed in the table 1.

Table 1. Results of urologic evaluation in our hematospermic patients.

Results	No. of patients
Normal	23
Bladder tumor	1
Benign prostatic hyperplasia	2
Varicocele	3
Hydrocele	1
Renal calculus	1
Total	31

Although various abnormalities were detected in 8 of the patients, only 3 of them had significant urologic disease, but in none of these a relationship appeared between hematospermia & the disease process.

Table 2. Incidence of malignancy in published hemospermia series.

References		No. Tumor	No. Hemospermia (% Tumor)
Papp et al.[15]	(2003)	14	121 (11.6)
Kochakarn et al.[16]	(2001)	0	68 (0)
Jinza et al.[17]	(1997)	1	107 (0.9)
Papp et al.[18]	(1994)	11	84 (13.1)
Creagh et al.[19]	(1993)	0	44 (0)
Weidner et al.[20]	(1991)	1	72 (1.4)
Jones [21]	(1991)	0	74 (0)
Fletcher et al.[22]	(1981)	6	70 (8.6)
Yu et al.[10]	(1977)	0	65 (0)
Tolley and Castro[23]	(1975)	0	26 (0)
Leary and Aguilo[24]	(1974)	0	200 (0)
Totals		33	931 (3.5)

DISCUSSION

Hematospermia has been described in patients between 19 & 56 years old, indicating that there is no predilection for age but only for sexually active men.

In the present study we have found that (84%) of the patients had repeated episodes of hematospermia separated by weeks to months. This finding is higher than what was reported by a study made by Yu & associates[10] who reported a (55%) recurrence rate.

This study shows that the occurrence of hematospermia in the patients with normal findings on physical examination, including digital rectal examination & investigations, was not associated with presence of or didn't lead to future development of significant urologic disease.

Review of the literatures concerning hematospermia indicates the extreme rarity of instances in which it has been associated with significant disease. Among 14 patients reported to have cysts in the seminal vesicle, only 1 had hematospermia.[11] 47 patients seen over a 13-years follow up period by Quill[12] showed that only 6 patients had significant urological findings but these findings were deemed incidental than causal. Among 29 patients who probably had carcinoma primary in the seminal vesicles only 1 patient had hematospermia.[13] Among 46 adult patients with primary sarcoma of the urogenital system only 1 had hematospermia.[14] Another

literature review of the etiological studies of hemospermia identified a total of 33 tumors in 931 cases (3.5%) (Table 2), of the 33 tumors identified in these series 25 were of prostatic origin. All of these patients were older than 40 years. The remaining tumors were in the seminal vesicles in 6 patients, testicular in 1and epididymal in 1.

Conclusions

Hematospermia is an infrequent, benign condition & causes acute anxiety in the patients.

Most men with hematospermia are in their 30s, and the problem is most commonly due to infective cause of the urogenital tract. Often only simple investigations and appropriate treatment are required.

Patients older than 40 years who have persistent or recurrent hematospermia or associated sympyoms such as hematuria should be thoroughly investigated to rule out more serious underlying disorders such as malignancy.

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