The Ulster Medical Journal, Volume 67, No. 1, pp. 25-28, May 1998.

The haematuria clinic – referral patterns in Northern Ireland

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Accepted 1 February 1998

SUMMARY

One hundred consecutive patients with haematuria were seen over a three month period at the haematuria clinic, Belfast City Hospital. 14% of patients were found to have transitional cell carcinoma of the urinary bladder; all of these presented with frank haematuria and were over 50 years of age. No malignancy was detected in the microscopic haematuria group. 14% of patients with macroscopic haematuria held back for longer than one month before seeking advice from their general practitioner. 23% with macroscopic and 30% with microscopic haematuria had their symptoms noted by the general practitioner for more than a month before they were referred for investigation. The waiting time for initial investigation at the haematuria clinic took longer than six weeks in 52% with macroscopic and 39% with microscopic haematuria. Our study has identified a high-risk group who need immediate referral and investigation. The importance of patient education, rapid referral by general practitioners and also the need to increase the capacity of the haematuria clinic are emphasized.

INTRODUCTION

Haematuria is often the first presenting sign of an underlying urological malignancy. Urological malignancy has been reported in 14.7 to 21.8% of patients with macroscopic haematuria[1, 2] and in up to 2% of patients with microscopic haematuria.[3] The commonest malignancy presenting with this symptom is transitional cell carcinoma most often involving the bladder (TCCB).

Most bladder tumours are curable if detected at an early stage and if appropriate treatment is instituted.[4,5] As the disease progresses, prognosis decreases markedly and the 5 year survival for muscle-invasive bladder cancer after conventional treatment with radiotherapy or cystectomy or in combination is at best 35% - 45%.[6-8] Both the depth of invasion and development of metastases are time-dependent and Hendry et al[9] has shown that with early diagnosis an increased proportion of potentially curable T2 tumours are detected. The data support the assertion that delay in detecting and instituting treatment has an adverse effect on patient survival.

The investigation of haematuria commonly involves a delay before treatment is undertaken. The causes of this may be attributed to delay by the patient in seeking medical advice, general practitioner delay in referring for investigation and hospital delay in providing timely investigation.

Patients with haematuria as a rule tend to seek advice quickly.[4, 9, 10] Therefore the delays in initiating treatment may be the responsibility of medical personnel. Studies have indicated that the average time delay from general practitioner referral to diagnostic cystoscopy is four weeks.[11]

Haematuria clinics have been set up across the United Kingdom to provide an investigative service for patients with haematuria in an effort to decrease the morbidity and mortality by earlier diagnosis of urological malignancy. This paper audits the diagnoses, referral patterns and time delays in the investigation of patients with haematuria referred to the Department of Urology, Belfast City Hospital, Northern Ireland.

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PATIENTS AND METHODS

Our study included 100 consecutive patients attending the haematuria clinic between May 1995 and August 1995. Following referral by the general practitioner for investigation of frank or microscopic haematuria, patients were seen at the haematuria clinic (scheduled once a week) at the Day Procedure Unit, Belfast City Hospital. A history was taken of their complaint including details of the onset of symptoms and when they were seen by their general practitioner. The date of referral was taken from the general practitioner's referral letter. Following this, patients underwent a flexible cystoscopy under local anaesthesia (2% lignocaine gel).

Any new case of bladder cancer detected had an urgent intravenous urogram (IVU) and they were placed on the next available operating list of the appropriate consultant for transurethral resection under general or regional anaesthesia to stage and grade the tumour. All other patients had a routine IVU requested on an outpatient basis and were given early appointments to the clinic for further assessment.

RESULTS

Over the period May 1995 to August 1995, 100 patients (64 males, 36 females) with mean age of 57 years (range 18 - 87) were referred to the haematuria clinic. 56 patients (56%) were referred with frank haematuria, and 44 patients (44%) with microscopic haematuria discovered on routine testing.

TABLE 1

Diagnosis made in 100 patients at the haematuria clinic.

Diagnosis	Number of patients (%)
No Diagnosis	73
Transitional cell carcinoma bladder (TCCB)	14
Benign prostatic hyperplasia	5
Previous transurethral resection of prostate	3
Bladder neck stenosis	2
Urethral stricture	2
Meatal Stenosis	1

Diagnoses made at the haematuria clinic are shown in Table I. Fourteen patients (14%) had TCCB and all these presented with frank haematuria. The mean age of these patients was 71 years (range 53 -82). No malignancies were detected in the microscopic haematuria group in this study.

Eight patients (8%) had macroscopic haematuria related to their prostate. Three patients had previously undergone transurethral resection of their prostate and had prominent vessels at the bladder neck which bled on contact. The remaining five patients had mild to moderate outflow obstructive symptoms, and were found to have an enlarged prostate with congested mucosa overlying the gland and bladder neck.

Thirty-three (60%) patients with macroscopic haematuria presented to their general practitioners within one week, and by four weeks, forty-eight (86%) patients had sought advice from their general practitioner Table II.

TABLE II

Time between patient noticing/detecting symptoms and attending general practitioner in the macroscopic haematuria group (patient delay).

Patient delay	*Macroscopic haematuria*
< 1 week	33 (60%)
1 - 4 weeks	15 (26%)
> 4 weeks	8 (14%)
Total	56

77% with macroscopic, and 70% with microscopic haematuria were referred by the general practitioner for investigation within one month of presentation Table III. Within the first week of attending, 32% of patients with macroscopic, and 25% with microscopic haematuria had been referred. However, 14% of patients with macroscopic haematuria had symptoms for more than two months before being referred for hospital investigation.

The mean time from referral by the general practitioner to attendance at the clinic was six weeks (range 2 - 12 weeks). Only 18% with macroscopic and 25% with microscopic

Table III

Time between attending general practitioner to referral (general practitioner delay).

GP delay	*Macroscopic haematuria*	*Microscopic haematuria*	*All patients (%)*
< 1 week	18 (32%)	11 (25%)	29
1 - 4 weeks	25 (45%)	20 (45%)	45
5 - 8 weeks	5 (9%)	6 (14%)	11
> 8 weeks	8 (14%)	7 (16%)	15
Total	56	44	100

haematuria were investigated within four weeks of referral. However, 48% with macroscopic and 61% with microscopic haematuria were investigated within six weeks of referral by their general practitioner. The remaining patients, 52% with macroscopic, and 39% with microscopic haematuria, took longer than six weeks to have their initial investigation Table IV.

TABLE IV

Time between general practitioner referral to attendance at the haematuria clinic (hospital delay).

Hospital delay	*Macroscopic haematuria*	*Microscopic haematuria*
< 2 weeks	0	2 (5%)
2 - 4 weeks	10 (18%)	9 (20%)
4 - 6 weeks	17 (30%)	16 (36%)
6 - 8 weeks	23 (41%)	13 (30%)
> 8 weeks	6 (11%)	4 (9%)
Total	56	44

DISCUSSION

The importance of investigating haematuria with minimal delay is well established. Our study has shown that patients attending a haematuria clinic have a 27% rate of a definitive pathological diagnosis being made. In particular, 14% of patients had urothelial malignancy, all having had macroscopic haematuria as the presenting symptom; and all were over 50 years of age. The malignancy rate in this study is higher than the rate of 2 - 11% reported by others.[3,12] Although in this study, no patients with microscopic haematuria had malignancy in the lower urinary tract, other larger studies' have reported up to 2% pick-up rate of malignancy in patients with microscopic haematuria. While all patients with haematuria require investigation, our results suggest that those with macroscopic haematuria require urgent referral and should have completed investigations within four weeks of presentation.

This study supports the findings of others that patients with macroscopic haematuria tend to seek advice early. [4,9,10] Wallace and Harris[4] showed that 75% of their patients attended their general practitioner within one month of developing haematuria and our study showed that 86% attended their general practitioner within the month. However, 14% patients with macroscopic haematuria waited more than one month before seeking the general practitioner's help. We were able to identify two major reasons for the delay in patients with macroscopic haematuria referring themselves for diagnosis. One was the fear of the diagnosis of malignancy; and the second was the lack of urgency because of previous history of haematuria either due to urinary tract infections or calculus disease. Among the eight patients who delayed more than four weeks in attending the general practitioner, one was found to have malignancy. This finding would suggest that better patient education as to the significance of haematuria is required.

In our study, 77% with macroscopic haematuria, and 70% with microscopic haematuria were referred within four weeks of attending the general practitioner. However, 23% of those with macroscopic haematuria, and up to 30% with

microscopic haematuria had their symptoms for more than a month before they were referred for hospital investigation. It is clear from our results that patients with macroscopic haematuria need to be referred immediately by their general practitioner. Repeated urinalysis and urinary bacteriology should not delay referral in this macroscopic category. Those with microscopic haematuria can be commenced on antibiotic therapy if symptoms of UTI are present and if asymptomatic microscopic haematuria persists then they should be referred for hospital investigations without delay. It is clear that the waiting time for patients to attend the haematuria clinic is too long, with 82% with macroscopic haematuria and 75% with microscopic haematuria waiting longer than four weeks. Some reasons for delay were:-

1. patients who could /did not attend and had to be re-appointed
2. inappropriate referrals to the general surgeon, gynaecologist or renal physician etc., who then refers these patients to us
3. insufficient number of sessions allocated to the haematuria clinic

The ideal would be for patients to be seen at the haematuria clinic within four weeks of the onset of symptoms.[11] Therefore, to reduce the waiting time for patients to be seen at the haematuria clinic, all patients with haematuria should be referred to the urology service and this service should increase the number of haematuria clinics to two per week.

Our study has highlighted a high risk group of patients with painless frank haematuria above the age of 50 years of age who require immediate referral and investigation. It has also emphasised the importance of patient education in reducing delay in seeking medical attention and the need for the general practitioner to refer patients earlier especially if the patient presents with painless frank haematuria. It has become apparent to us that in order to offer an efficient service for the investigation of haematuria, we would need two clinics per week to reduce the waiting time of those referred.

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