

Haematuria in Urogynaecology (Presence of red blood cells in urine) Full Clinical Guideline

Gynae/07:22/H6

Contents

Section	Page
1	Summary
2	Aims
3	Objectives
4	Introduction
5	Abbreviations
6	Definitions
7	What is significant haematuria?
8	Initial investigations for a patient with s-NVH and persistent a-NVH
9	When to book for cystoscopy
10	Recommendations
11	Justification
12	Provenance
13	Monitoring compliance and effectiveness
14	References
Appendix A	Decision algorithm for the investigation and referral of haematuria
	Documentation Control

1. Summary

Haematuria picked up within Urogynaecology needs to be investigated to exclude sinister causes.

Investigations required:

- MSU
- Urine cytology
- Pelvic and Renal USS

Referral criteria for specialist input

2. Aims

To improve the assessment, diagnosis and management of haematuria

3. Objectives

- To provide evidence-based recommendations for the appropriate pathway to aid assessment, diagnosis and management of haematuria
- To set out criteria for referral to specialists.

4. Introduction

Non-Visible/Invisible/microscopic haematuria (blood in the urine) can be an incidental finding that alone is not necessarily abnormal.

Visible/macrosopic haematuria may be a sign of serious underlying disease, including malignancy that warrants a thorough diagnostic evaluation¹.

Urine dipstick on a fresh voided urine sample is considered a sensitive means of detecting the presence of haematuria. Urine microscopy has a significant false negative rate and is more labour

intensive, and adds little to establishing the diagnosis of haematuria.

Positive haematuria is considered to be **1+ or greater on dipstick**.

Trace haematuria is considered **negative**.

Routine microscopy for confirmation of haematuria is not recommended, but may be used to exclude UTI. There is no distinction in significance between non-haemolysed and haemolysed dipstick-positive haematuria; 1+ positive for either should be considered equally significant.

5. Abbreviations

USS - Ultrasound Scan
UTI - Urinary Tract Infection

6. Definitions

Visible Haematuria (VH): otherwise referred to as macroscopic or gross or frank haematuria. Urine is coloured pink or red.

Non-Visible Haematuria (NVH): otherwise referred to as invisible, microscopic or dipstick positive haematuria; is defined as 1+ on dipstick urinalysis.

It is further subdivided into symptomatic and asymptomatic as follows:

Symptomatic Non-Visible Haematuria (s-NVH). Symptoms which prompted a health care professional to deem that a urine dipstick is necessary such as voiding irritative lower urinary tract symptoms (LUTS); hesitancy; frequency; urgency; dysuria.

Asymptomatic Non-Visible Haematuria (a-NVH). Incidental detection in the absence of LUTS or upper urinary tract symptoms.

Persistent a-NVH could be significant. Persistent positive dipstick is defined as 2 out of 3 isolated dipsticks positive for NVH. The 3 dipsticks should be done at weekly intervals and the interval between the first and third dipstick should not be more than a month.

7. What is significant haematuria?

- Any single episode of VH
- Any single episode of s-NVH (in absence of UTI or other transient causes)
- Persistent a-NVH (in absence of UTI or other transient causes). Persistence is defined as 2 out of 3 dipsticks positive for NVH

Transient causes that need to be excluded before establishing the presence of significant haematuria are:

- Urinary tract infection (UTI) Haematuria in association with UTI is not uncommon. Following treatment of UTI, a dipstick should be repeated to confirm the post-treatment absence of haematuria. It should be remembered that UTI (regardless of haematuria) can be the first presentation of significant genito-urinary pathology, and should be further investigated if clinically indicated. UTI is most readily excluded by a negative dipstick result for both leucocytes and nitrites. Otherwise an MSU negative for pyuria and culture are required.
- Calculi with the use of pelvic and renal USS
- Beeturia
- Exercise induced haematuria or rarely myoglobinuria (VH and NVH)
- Menstruation
- Drug discolouration – rifampicin, doxorubicin

N.B. The presence of haematuria (VH or NVH) should not be attributed to anti-coagulant or anti-platelet therapy and patients should be evaluated regardless of these medications.

8. Initial investigations for a patient with s-NVH and persistent a-NVH

- Exclude UTI and/or other transient causes

Exclude renal disease as a cause, particularly in younger patients:

- Blood pressure (to confirm/exclude age related hypertension)
- Plasma creatinine/eGFR (reduced GFR is <60 ml/min)
- Urine for protein:creatinine ratio (PCR) or albumin:creatinine ratio (ACR) on a random sample – significant proteinuria is PCR \geq 50 mg/mmol, or ACR \geq 30 mg/mmol.

N.B. 24 hour urine collections for protein are rarely required. An approximation to the 24 hour urine protein or albumin excretion (in mg) is obtained by multiplying the ratio (in mg/mmol) x10.

9. When to book for cystoscopy

As urgent 2 week wait:

- Visible/macroscopic haematuria – at any age (transient causes excluded)
- Symptomatic NVH (s-NVH) – at any age – in whom transient cause has been excluded eg UTI, and has persisting voiding irritative urinary symptoms, hesitancy, frequency, urgency, dysuria
- Persistent asymptomatic NVH (a-NVH) – aged \geq 40 years – which is persistent (2 of 3 dipsticks positive, done at weekly intervals within a month)

As routine:

- Asymptomatic NVH (a-NVH) - <40 years – which is persistent (2 of 3 dipsticks positive, done at weekly intervals within a month) and investigations for nephrological markers are normal

10. Recommendations

- All patients have a urine dipstick at initial consultation [Evidence Level C]
- Any haematuria should be classified and investigated accordingly [Evidence Level C]
- UTI and other transient causes should be excluded [Evidence Level C]
- Exclude renal disease [Evidence Level B]
- Refer for cystoscopy [Evidence Level B]

11. Justification

Visible haematuria is a common presentation in patients with cancers of the bladder or kidney. Around one patient in five who develops visible haematuria is likely to have urological cancer. Clinic based studies shown that 15% to 37% of patients with visible haematuria have cancer. Higher proportions were found in areas where substantial numbers of people worked in hazardous industries.^{2,3,4}

The incidence of bladder and kidney cancers rises steeply with each decade between the ages of 40 and 60, rising from 9.2 per 100,000 in men aged 40-44 to 36.5 per 100,000 in men aged 50-54, and 109.5 in those aged 60-64. The incidence in women has shown a similar rate of increase with age, but the proportion affected in each age-group was less than the corresponding proportion of men.²

Patients with haematuria need to be investigated promptly. The '2 week rule' has increased the cancer detection rate in NHS institutions.⁶ The current policy criteria is based on the Joint Consensus Statement on the Initial Assessment of Haematuria from British Association of Urological Surgeons and Renal Association issued in 2008⁷. Referral guidance for suspected cancers from National institute of clinical excellence⁸ and Scottish Referral Guidelines for Suspected Cancer⁹ have also been taken into account along with the evidence review "the Diagnostic Cystoscopy Surgical Threshold Policy Evidence Summary, 2007."¹⁰

12. Provenance

Clinical condition: Haematuria

Target patient group: Patients who present within Urogynaecology with haematuria

Target professional group (clinical competence):

Urogynaecology specialist nurses

Urogynaecology - Womens health physiotherapy specialists

Junior Doctors in Urogynaecology

13. Monitoring Compliance and Effectiveness

As per the audit forward programme

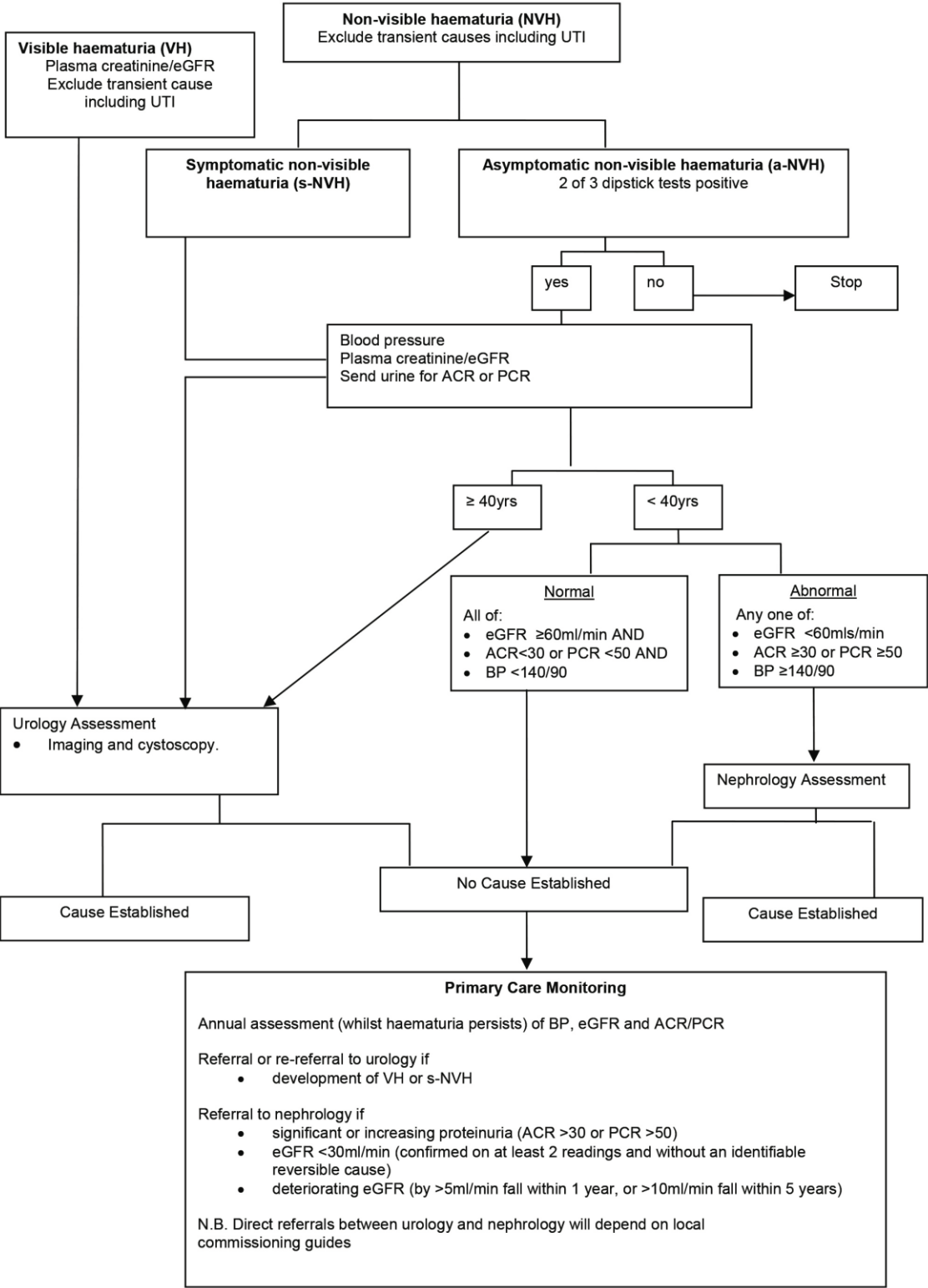
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10. Diagnostic Cystoscopy Surgical Threshold Policy Evidence Summary, Cambridgeshire and Peterborough Public Health Network, September 2007.

Evidence levels:

- A. Meta-analyses, randomised controlled trials/systematic reviews of RCTs
- B. Robust experimental or observational studies
- C. Expert consensus.
- D. Leeds consensus. (where no national guidance exists or there is wide disagreement with a level C recommendation or where national guidance documents contradict each other)

Decision algorithm for the investigation and referral of haematuria.



Documentation Control

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