Canadian guidelines for the management of asymptomatic microscopic hematuria in adults [1]

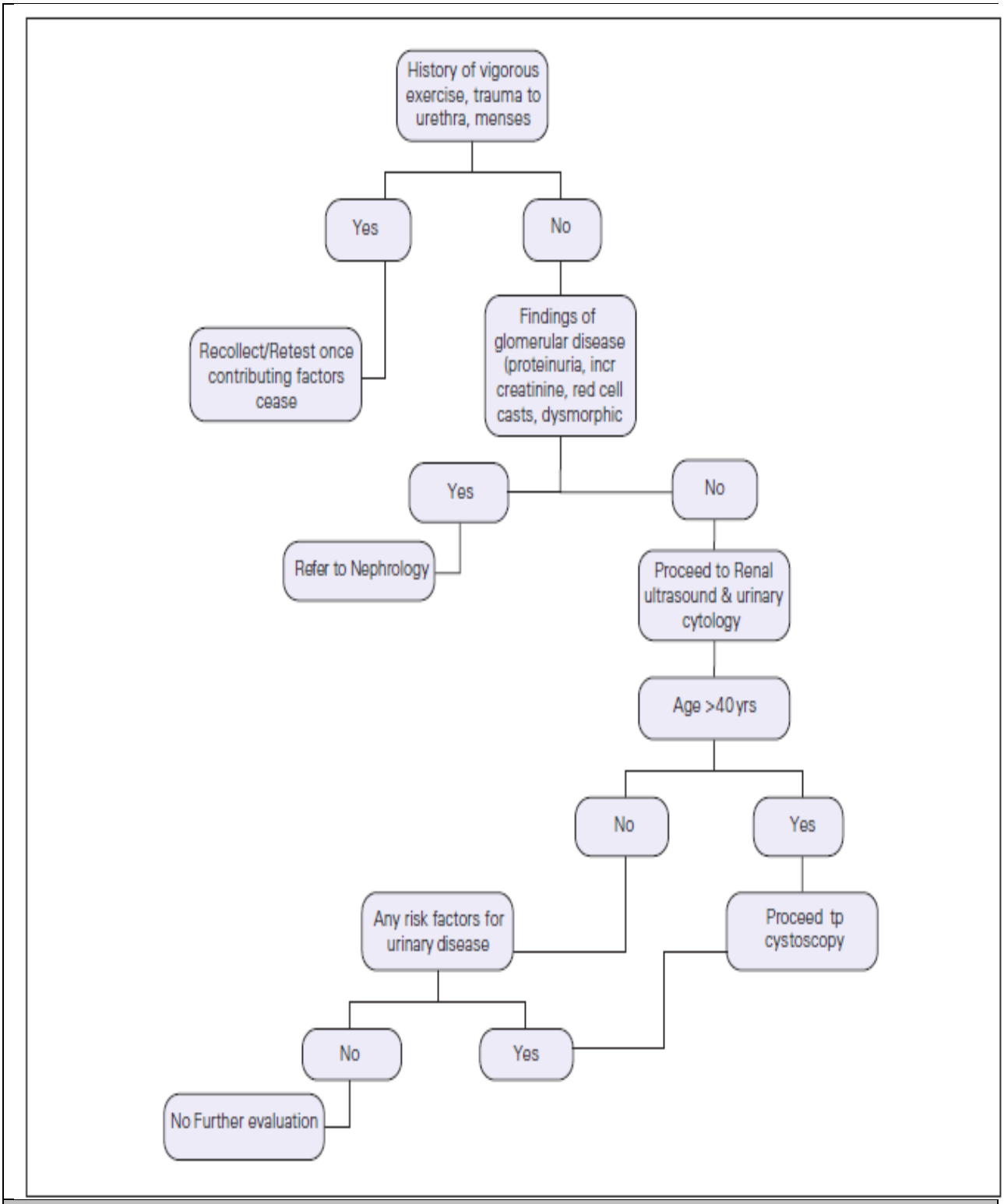

Figure 1. Algorithm for the evaluation of the adult patient with asymptomatic microscopic hematuria.

1. Definition of microscopic hematuria:

a. Greater than 2 RBCs/hpf on two microscopic urinalysis without recent exercise, menses, sexual activity or instrumentation (Grade C Recommendation; Level of Evidence 3b and 4).

2. Indications for nephrology referral:

a. The presence of proteinuria, red cell casts, or dysmorphic red blood cells on microscopic exam and/or an elevated creatinine is suggestive of a glomerular cause of hematuria (Grade C Recommendation; Level 3b and 4).

3. Indications and extent of urological evaluation:

a. All patients with microscopic hematuria should be investigated by urine cytology and upper tract imaging (Grade D Recommendation; Level 5 evidence).

b. Patients > 40 years of age, those with positive or atypical cytology, or any patient with the presence of any of the following risk factors should have their lower tract assessed by cystoscopy (smoking history, occupational exposure to chemicals or dyes, history of irritative voiding symptoms, analgesic abuse with phenacitin, history of pelvic irradiation, or cyclophosphamide exposure) (Grade C Recommendation; Level 3b and 4 evidence).

4. Upper tract evaluation:

a. There is limited evidence to strongly recommend one modality. Thus, although ultrasound, CT or IVP are acceptable, taking patient safety (ionizing radiation and exposure to i.v. contrast), availability, and cost into consideration, it is recommended that ultrasound be used as the imaging test of first choice (Grade C Recommendation; Level 3b and 4 evidence).

5. Follow-up after negative evaluation:

a. Patients should be followed by their primary care physician with urinalysis, urinary cytology, and blood pressure checks at 6, 12, 24 and 36 months (Grade C Recommendation; Level 3b and 4 evidence)

i. Repeat urological assessment is required if a patient develops gross hematuria, positive or atypical cytology, or irritative voiding symptoms without infection.

ii. Nephrology referral is indicated with the development of hypertension, proteinuria, or the finding of glomerular bleeding.

iii. If none of these occur after three years, then routine follow-up for persistent hematuria can be ceased.

Guideline summary

References

1- Wollin et al. Canadian guidelines for the management of asymptomatic microscopic hematuria in adults. Canadian Urology Association J. (2009) 3(1):77-80