

key points

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Glomerulonephritis is a histological diagnosis made on renal biopsy, and is defined as inflammation of the glomeruli. It is the second most common renal disease leading to end-stage renal disease in the UK. Many forms of acute glomerulonephritis respond well to treatment if treated early, but result in serious irreversible loss of renal function if this early treatment opportunity is not recognised.

Glomerulonephritis may present in a variety of ways, e.g. incidental detection of asymptomatic renal function abnormalities, symptoms or signs of the condition causing the glomerulonephritis, abnormal clinical features arising from the initial renal function abnormalities and symptoms and/or signs of end-stage renal disease.

A number of key steps will help identify rapidly progressive glomerulonephritis: recognising that the clinical pattern is compatible with this condition; comparing current information (both urinalysis and serum creatinine/eGFR) with historical results; and additional testing to confirm, quantify and identify the pattern of abnormal results.

Urology referral is recommended for patients with visible haematuria, and those with persistent asymptomatic non-visible haematuria aged ≥ 50 . In the absence of a urological cause, haematuria may indicate an underlying (typically chronic) glomerulonephritis. The most common disease is IgA nephropathy, but Alport's disease and thin membrane disease are important alternatives. Community-based follow-up is appropriate for those with eGFR >60 ml/min, with at least annual monitoring of urinalysis, quantification of urine protein excretion, serum creatinine/eGFR and blood pressure.

Positive urinalysis for protein ($\geq 1+$) should prompt: MSU for culture to exclude UTI; repeat urinalysis for proteinuria on two further occasions, preferably on the first voided sample in the morning to maximise the sensitivity of the test and to exclude postural proteinuria; quantification of urinary protein excretion and clinical review. Follow-up in the community for patients with urine PCR of <100 mg/mmol and eGFR >60 ml/min is reasonable.

Patients with chronic glomerulonephritis typically have haematuria, proteinuria and hypertension, and if the disease is advanced small kidneys may be detected by renal ultrasound. The goals of treating both the underlying glomerulonephritis and the consequent chronic kidney disease are to retard progression of the disease, prevent complications and prepare patients for renal replacement therapy in a timely and appropriate manner.