key points

SELECTED BY

Dr Phillip Bland
Former GP, Dalton-in-Furness, UK

Glomerulonephritis is the second most common cause of end stage renal disease (ESRD) in the UK and the most common cause in those under 35. Some forms can respond well to treatment if diagnosed early. However, if glomerulonephritis goes unrecognised, it can lead to irreversible loss of renal function. The most common type in the UK is IgA nephropathy, which may be associated with chronic liver disease. Other types of glomerulonephritis are familial and most are more common in older patients. Some types, particularly membranous glomerulonephritis, can occur secondary to an underlying malignancy.

Glomerulonephritis can present in a wide variety of ways, ranging from asymptomatic urinary abnormalities to fulminant disease with life-threatening acute kidney injury and extra-renal manifestations. Asymptomatic invisible haematuria is common. In the absence of infection or a urological cause, glomerulonephritis should be considered. Proteinuria is almost always glomerular in origin and is a strong predictor of progressive kidney disease. Significant proteinuria (> 1 g/day) in the absence of an identifiable cause warrants referral.

Episodic painless visible haematuria associated with glomerular disease is often brown or 'smoky', and clots are unusual. It is mainly seen in children and young adults and may represent a post-infectious glomerulonephritis. Nephrotic syndrome is defined by: oedema, nephrotic range proteinuria (> 3.5 g/24 hr) and hypoalbuminaemia (< 30 g/L). Urgent referral to a nephrologist is indicated.

Presentation with renal failure occurs in two situations:
- In those who have had progressive glomerulonephritis over many years and have never sought medical attention. This is most commonly observed in young people with IgA nephropathy. These patients may present with established hypertension, proteinuria and renal impairment.
- In very aggressive and rapidly progressive glomerulonephritis. These patients present with severe hypertension and uraemic features.

The definitive investigation for glomerulonephritis is kidney biopsy. Hypertension is the key modifiable risk factor in preserving renal function. The KDIGO guideline recommends a BP target < 130/80 mmHg in patients with proteinuria. ACE inhibitors and angiotensin receptor blockers (ARBs) should be the first-choice therapy because of their effect on both BP and proteinuria. Proteinuria is the second key modifiable risk factor. In patients who are normotensive, ACE inhibitors or ARBs should still be initiated as their renoprotective effects are not confined to BP control.

A variety of immunosuppressive regimens are prescribed in secondary care for glomerulonephritis. Primary care has an important role in prescribing as specified by the specialist, detecting and reporting adverse drug reactions to both the initiating specialist and the MHRA, and identifying and reporting any suspected non-compliance to the specialist.