

Post-Infectious Glomerulonephritis

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What is Post-Infectious Glomerulonephritis (GN)?

Glomerulonephritis is a general term for inflammation of the kidney, particularly the filtering units called glomeruli. Many forms of GN can damage the kidney. Some follow infections, most commonly a strep throat or skin infection. Some forms of strep cause the body to produce antibodies that can also damage the kidney. These antibody levels peak 10 days – 2 weeks after a strep throat. It may take as long as 6 weeks after a strep skin infection for kidney damage to occur. The antibodies get trapped in the kidney where they cause damage and activate a system of immune proteins called complement.

One particular protein in this system, C3, gets used up, so its blood levels drop.

When the kidneys suffer inflammation, they cannot filter the blood correctly. They may also leak blood and protein in to the urine. The damage may cause dark urine, swelling, high blood pressure, or even kidney failure.

Other infections can cause GN, although less commonly than strep. These include other bacteria and viruses.

How do you diagnose post-infectious GN?

Any child who presents with signs of GN should be considered for the diagnosis of post-infectious GN. Strep infections are common in childhood, and many families are not aware that one has occurred. Blood tests may include studies to look for evidence of a strep infection, as well as levels of C3 complement. Blood tests may be performed

to rule out other causes of GN and to measure kidney function.

Signs of GN

- Abnormal Urine
 - Blood
 - Protein
 - Casts
- High Blood Pressure
- Abnormal Kidney Function
- Swelling

Kidney biopsy, actually examining a piece of kidney in the laboratory, is rarely necessary in children with suspected post-infectious GN. If they fail to recover as expected, it may be needed.

How do you treat post-infectious GN?

There is no treatment for post-infectious GN. Medicines may be needed to treat high blood pressure and control swelling. In the most severe cases, dialysis could be necessary to replace kidney function.

general, the milder the initial problems, the faster the recovery. Most children will have normal C3 levels in 6 weeks. If the C3 remains low for longer than 6 months or its levels go up and down, then other types of GN should be considered.

By the time GN develops, the infection causing it may be gone. Antibiotics may not always be needed.

Small amounts of blood, detectable only by dipstick or examination with a microscope, may remain in the urine for 2 years after an episode of GN. This microscopic hematuria is not concerning.

More than 90% of children with post-strep GN recover completely within a few months. In