IgA nephropathy

What is IgA nephropathy?

IgA nephropathy (or 'IgA' for short) is a kidney disorder that occurs when IgA – a protein that normally helps the body fight infection – settles in the kidneys. After many years, the IgA deposits may cause the kidneys to leak blood and sometimes protein in the urine. Kidney failure may also result. Some patients, however, never have a major problem.

Many people with IgA nephropathy leak blood in the urine. Others leak both blood and protein in the urine. Neither leakage means they will all have long-term problems. But, if too much protein leaks into the urine, the hands and feet can swell (this is 'nephrotic syndrome'). After 10–20 years with IgA, about 25% of adults develop end-stage renal disease (ESRD). They will then require dialysis or a kidney transplant to survive.

How do people know they have IgA nephropathy?

In the early stages, IgA often has no symptoms. This disease can be silent for years, even decades. The first sign that the patient may notice is blood in the urine. Visible blood may appear in the urine if a person has a cold, sore throat, or other infection. At other times, blood in the urine can only be detected by a urinalysis (described later).

Who is at risk of IgA nephropathy?

IgA nephropathy can occur at any age, even in childhood. People in their 30s are especially vulnerable. More men are affected than women.

What causes IgA nephropathy?

Scientists do not know what causes IgA proteins to lodge in the kidney, or whether the IgA is toxic to the kidney. IgA, like most types of nephritis, is probably due to an over-activity of the immune system (the body's natural defence mechanism). It is the most common type of nephritis. No consistent trigger for the disease has been found. Occasionally, it runs in families.

How is IgA nephropathy diagnosed?

A urine test called urinalysis, or dipstick, usually provides the first clue. In a urinalysis, a nurse dips a special paper strip with chemicals on it into the urine sample. The strip changes colour when blood or protein is present. Neither is normally present, but both can occur in IgA.

A blood test called a 'serum creatinine' is used to measure the kidney function. If the result is over 120 mcmol/L, then IgA has caused chronic kidney disease (CKD). If it is over 200 mcmol/L (less than 50% kidney function), then dialysis (and/or a transplant) is likely to be necessary one day. If there is a raised creatinine, the doctor will probably recommend a kidney biopsy. In this procedure, a needle is used to retrieve a small piece of kidney tissue for examination under a microscope. Only a biopsy can definitely diagnose IgA. Once a diagnosis of IgA is made, a person should have regular blood tests to monitor kidney function.

How is IgA nephropathy treated?

Kidney disease usually cannot be cured. When the kidneys are damaged, they cannot be repaired. Treatment focuses on slowing the disease and preventing complications.

The most important complication is high blood pressure (BP), also called hypertension. Hypertension damages the kidneys. Two types of blood pressure tablet – called angiotensin-converting enzyme (ACE-i) and angiotensin receptor blockers (ARBs) – may protect kidney function and may be 'better' than normal BP tablets in IgA. Pregnant women should not take either because they can damage the unborn baby. Whatever is used, the blood pressure should always be under 130/80 mmHg.

People with IgA may develop high cholesterol. By watching their diet and taking medicine, they can help lower their cholesterol level. Lowering cholesterol may help slow kidney damage.

Drugs that suppress the immune system – such as prednisolone – may be used to treat IgA, in a few patients. These drugs can have harmful side effects too. In research studies, fish oil supplements containing omega-3 fatty acids slowed kidney damage in some patients. One of the newer immunosuppressive drugs called mycophenolate mofetil (MMF) is also being tested in patients with IgA.

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