INFORMATION SHEET

GLOMERULAR DISEASES CLINIC

Membranous Nephropathy

Membranous nephropathy (MN) is a glomerular disease that is caused by an abnormal build up of proteins in the part of the kidney filter known as the glomerular "basement membrane". This part of the glomerulus is the (usually) thin bit of tissue that helps separate the blood from the urine. The protein that builds up here in membranous nephropathy is IgG, which is an antibody protein from the immune system in the body. It causes the usually thin and very tight layer of tissue to get thick and loose, and allows large amounts of protein to leak out of the blood and into the urine. This causes "nephrotic syndrome", leading to "edema", or swelling, in the body, and also leading to a high cholesterol level in the blood.

The diagnosis of MN is made through a kidney biopsy, since there are many causes of nephrotic syndrome.

Membranous nephropathy can occur as a result of other internal diseases. It occasionally develops in people with some types of cancers, or as a result of a side effect of some drugs. Other immune diseases, like lupus, can also cause a membranous nephropathy. And some infections, such as hepatitis B and C, can also have kidney involvement with MN. Often, though, the underlying cause of membranous nephropathy is not known. In these cases, it may involve an immune miscommunication, with the body mistaking part of the kidney for an enemy, and attacking it in the same way that it would an invading bacteria or virus.

Damage to the blood cleaning function of the kidneys often happens very slowly in patients with MN, occurring over years. So the main concern, initially, is helping control the edema and the problems that this can cause. Having severe edema may make it difficult to move around, and may cause skin problems from the swelling. Limiting salt in the diet and using medications to help get rid of extra salt and water is often helpful. Blood pressure medications such as ACE inhibitors are often used to try to decrease the loss of protein in the urine. Sometimes medicines are prescribed to decrease the chance of blood clots, which can be a problem in patients with nephrotic syndrome. Immunizations are important to decrease some types of infections.

Interestingly, MN sometimes goes away on its own. During the first 5 years after onset, this may happen in 1/3 of cases, even without any particular treatment. It is more likely if there is a mild or moderate amount of protein in the urine, and less likely if there is a large amount of protein in the urine. Another 1/3 of people seem to have a very stable course over many years, with no worsening and no improvement. And the remaining 1/3 have a slow decline in kidney function or worsening in the amount of protein in the urine, with up to 40% progressing to kidney failure after 15 years.

For people with large amounts of protein in the urine, or who appear to be having long term damage to their kidneys, immunosuppression medications are frequently used. These include corticosteroids, cyclosporine, tacrolimus, and cyclophosphamide.