

# Membranous glomerulonephritis

*Membranous glomerulonephritis* (MGN; also *membranous nephropathy*, MN) mainly affects middle-aged or older adults. Most often (70-80% of cases) it is a primary idiopathic autoimmune disease, 20-30% of the disease is secondary to infectious, tumor, systemic autoimmune diseases or after the administration of certain drugs<sup>[1]</sup>. MGN is the most common cause of nephrotic syndrome in adults (20-40%), more common in men.

**Microscopically** we find a diffuse thickening of the glomerular capillary wall caused by the deposition of immunocomplexes into the subepithelial space (between the podocytes and the basement membrane).

## Etiology

### Idiopathic (primary) form of MGN (most common)

Most diseases of this group are associated with the formation of autoantibodies against the M-type receptor for phospholipase A<sub>2</sub> (PLA<sub>2</sub>R). Some polymorphisms of the PLA<sub>2</sub>R gene in combination with some HLA-DQA1<sup>[1]</sup> polymorphisms are associated with a high risk of this form of the disease.

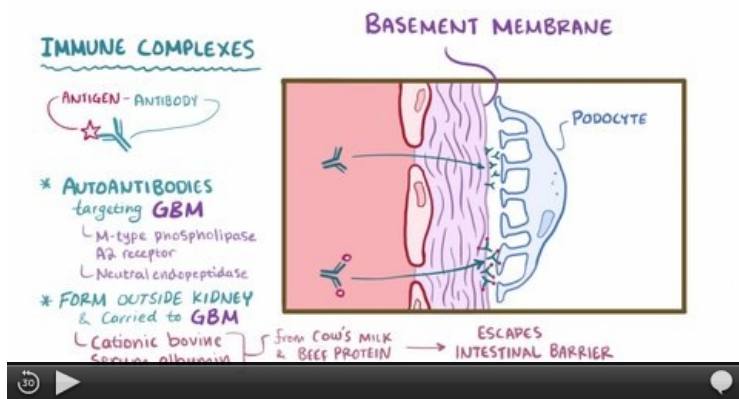
### Secondary form of MGN (20-30%)

- infections (viral hepatitis B and C),
- tumors (lung cancer, prostate cancer, hematological malignancies<sup>[2]</sup>),
- systemic autoimmune diseases (SLE),
- drugs (penicillamine, gold preparations, captopril, NSA).

## Clinical picture

Clinical manifestations may be unremarkable.

- sudden appearance of DKK swellings + their progression
- non-selective proteinuria + erythrocyturia, often fully developed **nephrotic syndrome**
- arterial hypertension (20-40%)
- impairment of renal function (at the time of dg. in 5-10%)



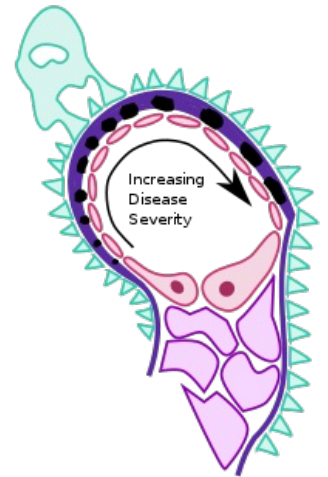
Video in english, definition, pathogenesis, symptoms, complications, treatment.

## Therapy

- *Idiopathic MGN*: corticoids, cyclophosphamide, chlorambucil, cyclosporine,
- *secondary MGN*: stop precipitating drugs / treat primary disease.

## Prognosis

- The fundamental importance of influencing the formation of immunocomplexes,
- with successful therapy, nephrotic syndrome may disappear,
- many years stationary or developing CKD.



Membranous GN (diagram)

# Links

## Related Articles

- Glomerulonephritis: Acute glomerulonephritis • Rapidly progressive glomerulonephritis • Chronic glomerulonephritis
- Glomerulopathy: Glomerulopathy manifested by nephrotic syndrome

## Reference

1. FLOEGE, Jürgen – AMANN, Kerstin. Primary glomerulonephritides. *The Lancet*. 2016, y. 10032, vol. 387, p. 2036-2048, ISSN 0140-6736. DOI: 10.1016/s0140-6736(16)00272-5 (<http://dx.doi.org/10.1016%2Fs0140-6736%2816%2900272-5>).
2. LEEAPHORN, Napat – KUE-A-PAI, Pogsathorn – THAMCHAROEN, Natanong. Prevalence of Cancer in Membranous Nephropathy: A Systematic Review and Meta-Analysis of Observational Studies. *American Journal of Nephrology*. 2014, y. 1, vol. 40, p. 29-35, ISSN 1421-9670. DOI: 10.1159/000364782 (<http://dx.doi.org/10.1159%2F000364782>).

## Literature

- DÍŤĚ, P., et al. *Vnitřní lékařství*. 2. edition. Galén, 2007. ISBN 978-80-7262-496-6.