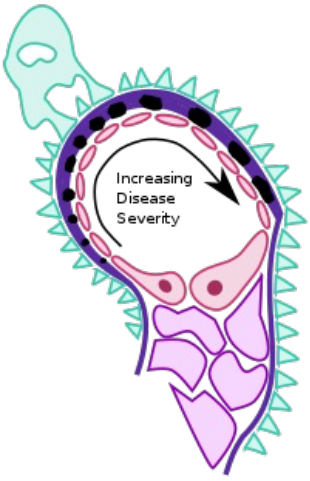
Membranous glomerulonephritis

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[1]. MGN is the most common cause of nephrotic syndrome in adults (20-40%), more common in men.



Membranous GN (diagram)

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_2 (PLA2R). Some polymorphisms of the PLA2R gene in combination with some HLA-DQA1[1] polymorphisms are associated with a high risk of this form of the disease.

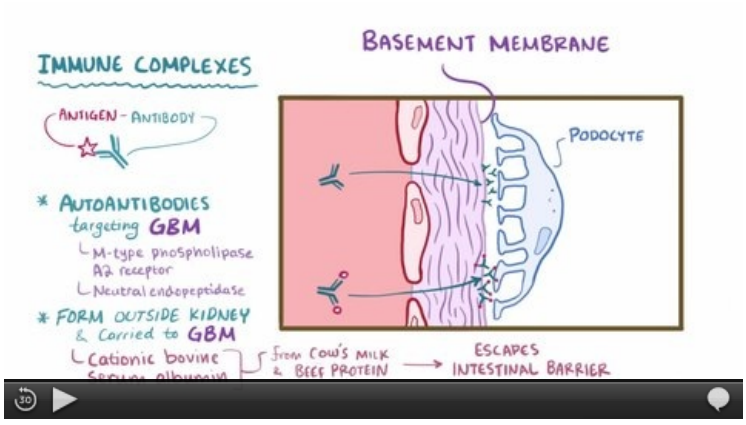
Secondary form of MGN (20-30%)

- infections (viral hepatitis B and C),
- tumors (lung cancer, prostate cancer, hematological malignancies[2]),
- 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.

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

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