

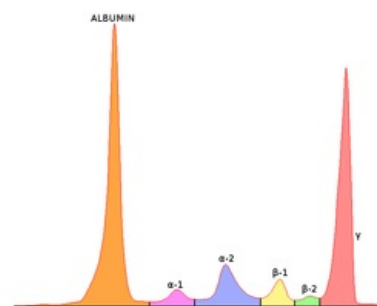
Paraprotein

Paraproteins are immunoglobulins (or their fragments) secreted by pathological clones of plasma cells, which arise during monoclonal gammopathy (plasmacytoma, amyloidosis). Since these proteins are monoclonal (secreted from a single lineage of plasma cells), they are immunologically homogeneous and form one band during electrophoresis. Their structure consists of 2 light and 2 heavy polypeptide immunoglobulin chains.

Clinical picture

Paraproteins and especially their light chains (mostly λ chains) are excreted by the kidneys. They cause atrophy and degeneration of the tubules, contributing to the clinical manifestation of “**myeloma kidney**”. Dehydration, hypercalcemia, and hyperuricemia accelerate the renal failure.

High production of paraprotein (especially IgA) leads to the formation of high molecular weight complexes, which increase blood viscosity and promote the development of **hyperviscosity syndrome**.



Serum protein electrophoresis with a peak in the γ (immunoglobulin) fraction

Links

Related articles

- Paraproteinemia
- Multiple myeloma
- Amyloidosis
- Bence-Jones protein

Literature

- KLENER, Pavel. *Vnitřní lékařství*. 4. edition. Praha : Galén : Karolinum, 2011. 1174 pp. ISBN 978-80-246-1986-6.