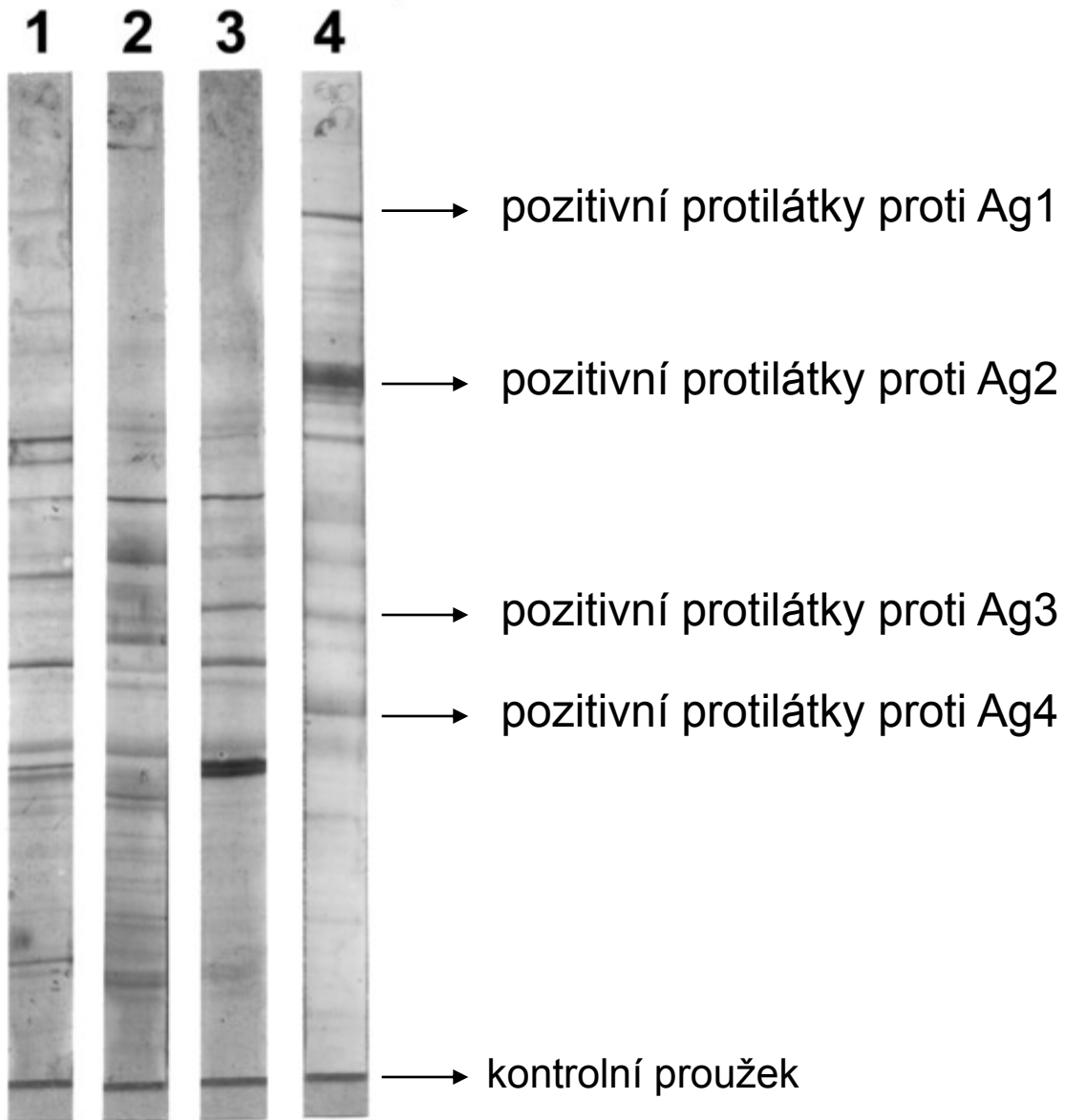


Imunoblot, elektroforéza,
imunofixace

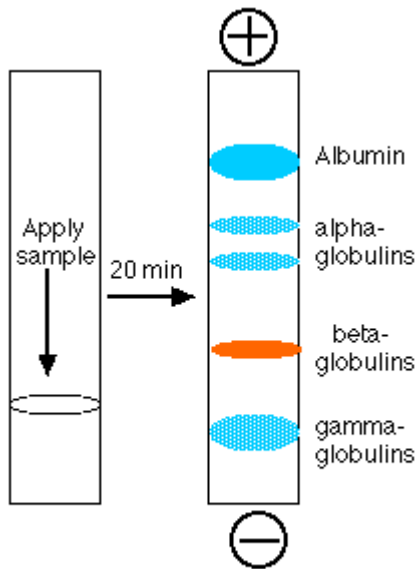
Imunoblot



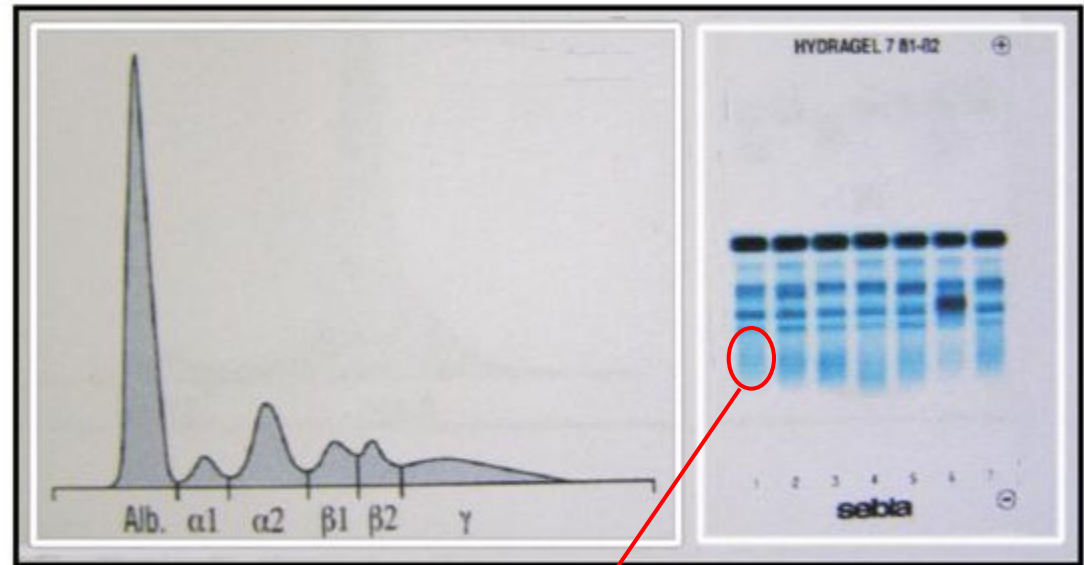
Elektroforéza

sérové proteiny mohou být elektroforeticky separovány

HYDRAGEL PROTEINE K20



Separating serum proteins
by electrophoresis



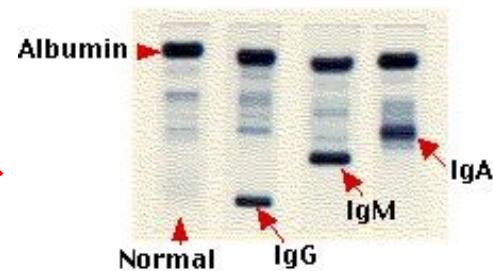
imunoglobuliny

- lze zachytit pouze hrubé změny:

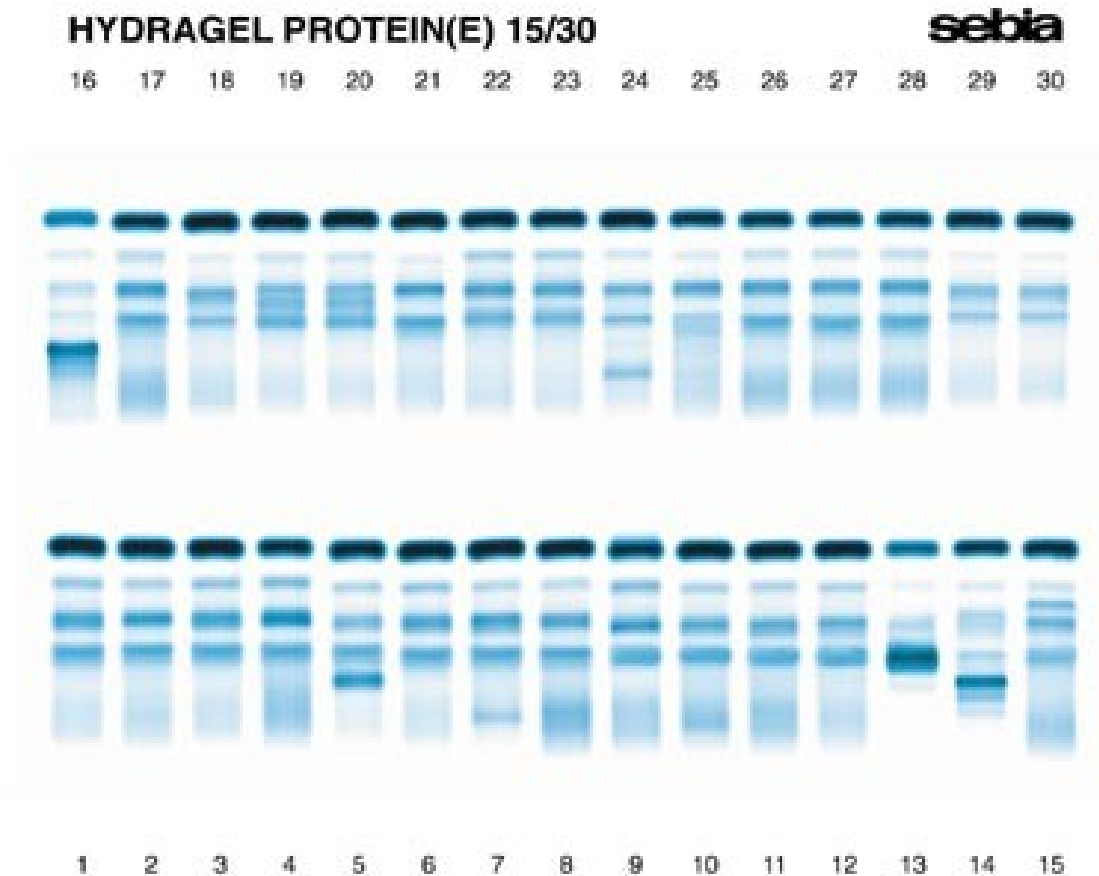
hypergamaglobulinémii,

hypogamaglobulinemii či monoklonální

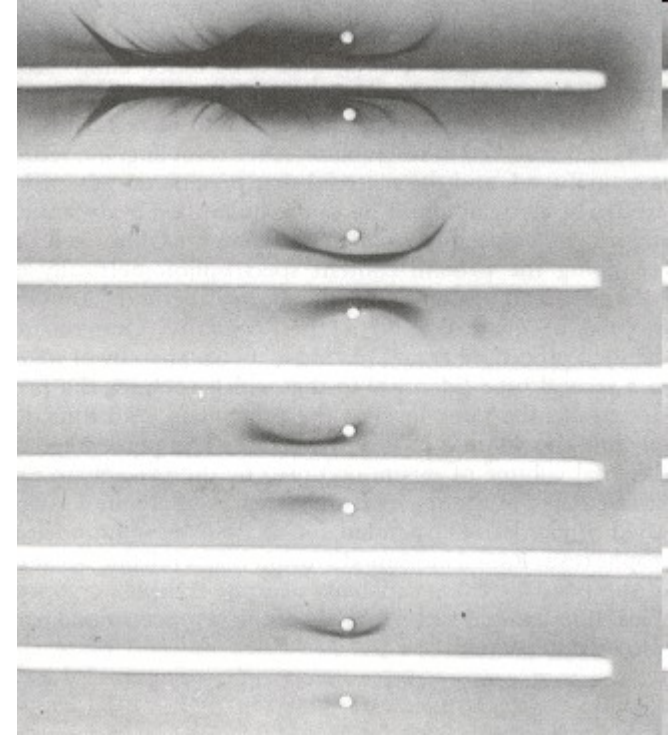
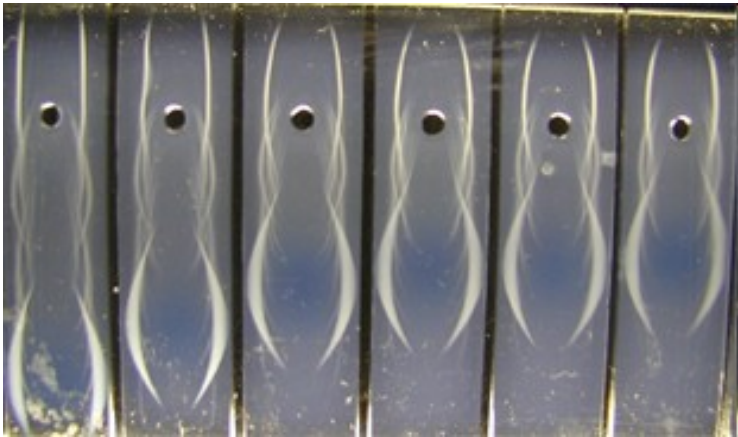
gamapatie



Elektroforéza



Imunoelektroforéza



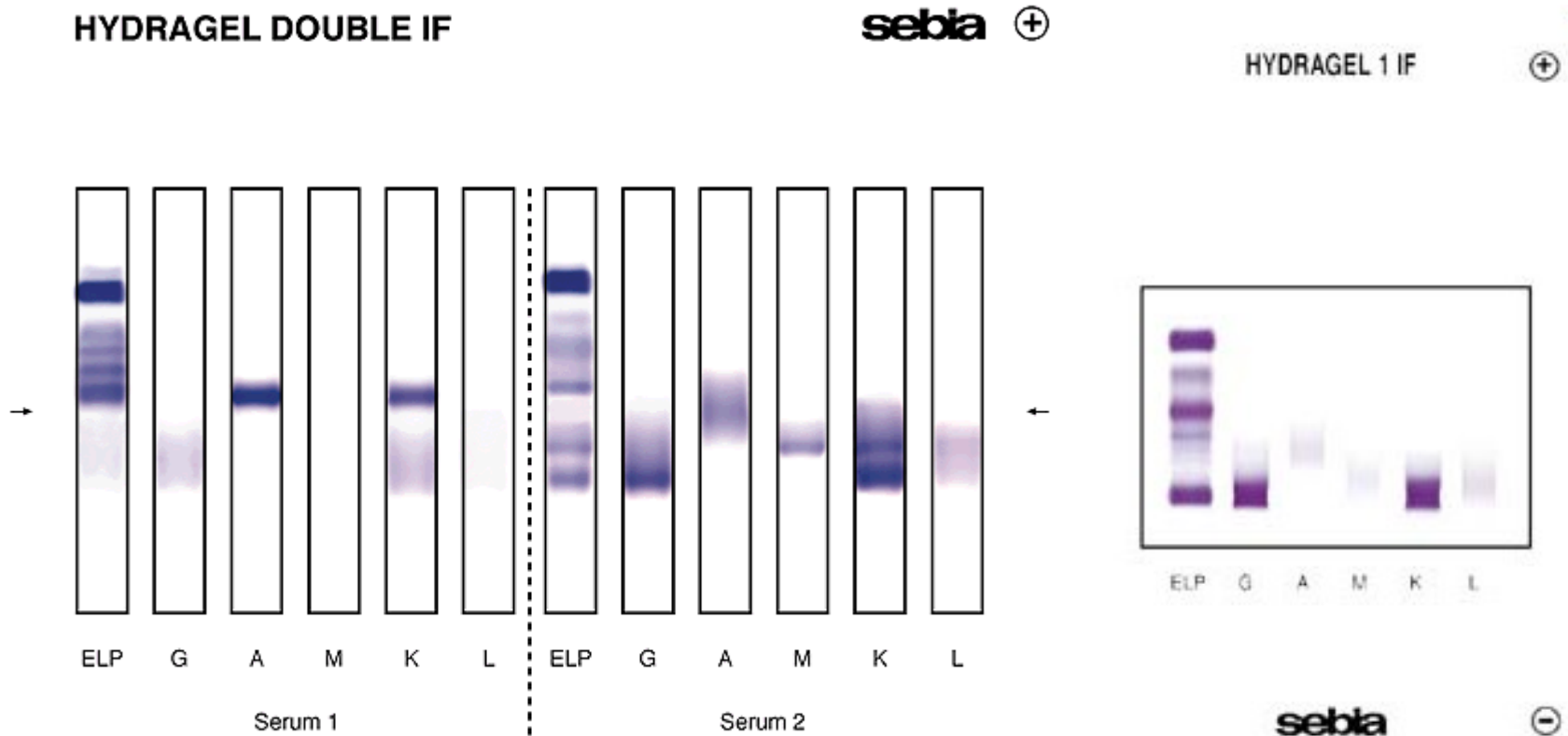
Immunoelectrophoresis. Serum from a normal control was placed in the top well and the patient's undiluted serum was placed in wells 2, 3, 5, and 7, reading down. Wells 4, 6, and 8 contained a 1:5 dilution of the patient's serum. The top trough contained antibodies to whole human serum. The third trough contained antibodies to human IgG; the fifth trough, antibodies to human IgA; and the seventh trough, antibodies to human IgM. The varied positions of the precipitin bands indicate the differences in migration of the proteins in an electric field.

-kombinuje elektroforézu a imunodifuzi:

1. Elektroforéza séra
2. Do agar. gelu se vyřízne podél rozděleného séra žlábek, který se naplní specifickým antisérem (např. proti gama řetězci,..)

Imunofixace

- určování typu paraproteinu (monoklonálního Ig)



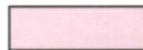
Pozn. 75 – 80% nemocných mnohočetným myelomem má v moči přítomny monoklonální lehké řetězce (Bence-Jonesova bílkovina/paraprotein). BJB poškozují buňky proximálních tubulů ledvin.

MGUS monoklonální gamapatie nejasného původu

Sector	Kappa	Lambda	κ/λ Ratio	Interpretation
1	Normal	Normal	Normal	Normal serum
2	Low	Low	Normal	BM suppression without Monoclonal Gammopathy
3			High	Monoclonal Gammopathy
4			Low	
5		Normal	Normal	Normal serum
6			Low	Monoclonal Gammopathy
7		High	Low	
8		Normal	Low	
9	Normal			Normal serum
10	Normal		High	Monoclonal Gammopathy
11			Low	
12	High		Normal	Polyclonal Ig increase or renal impairment
13			Low	Monoclonal Gammopathy
14	High	Low	High	Monoclonal Gammopathy
15		Normal	High	Monoclonal Gammopathy
16			Normal	Polyclonal Ig increase or renal impairment
17		High	Normal	Monoclonal Gammopathy with renal impairment
18			High	
19	Low			



With bone marrow (BM) suppression



Without bone marrow (BM) suppression