Autoantibodies: The mystery revealed

Connective Tissue Diseases

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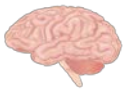
Anti-ribosomal proteins antibodies

- First discovered in the 70s in patients with **systemic lupus erythematosus** (**SLE**).
- **Target antigen**: ribosomal phosphoprotein P0 (38 kDa), P1 (19 kDa) and P2 (17 kDa) of the subunit 60S.
- Low prevalence (10% of SLE patients)
- **BUT highly specific** (>90%)
- Could be present even in individuals with negative anti-dsDNA or anti-Sm antibodies.

- **Not included** in the classification criteria for SLE.
- Most useful for the diagnosis of SLE when other specific autoantibodies are negative (early diagnosis/ avoid missed diagnoses).
- Suggested association with **neuropsychiatric** (up to 90% of patients, but data is controversial), **renal** (up to 35% of patients) and **cutaneous involvement (mostly acute lesions)** in SLE.



- Probably associated with liver damage (lupus hepatitis and autoimmune hepatitis in non SLE patients)

Screening technique:
Indirect immunofluorescence on HEp-2 cells

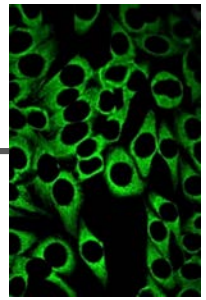
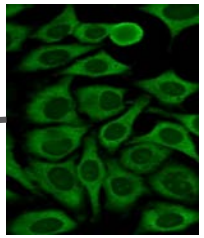
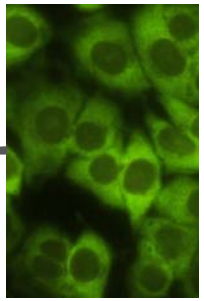
- **IIF pattern on HEp-2 cells**:
dense-grained cytoplasmic fluorescence= very fine, tightly-packed punctuations distributed throughout the cytoplasm, with peri-nuclear enhancement

- Often associated with other anti-nuclear antibody (ANA) fluorescence patterns
Yet: unreliable (sensitivity <30% and specificity=60%)

- Can be positive (ELISA/Dot-blot) in some cases of SLE patients with negative ANA by conventional IIF.

Confirmation techniques:

- **ELISA**
- **Line/dot blot immunoassay:** comparable performance (sensitivity between 15%-25% for a specificity of 99%)
- **ALBIA**

References