ABSTRACT

ABSTRACT | REFERENCES

Biopsies of skin lesions and clinically normal skin of patients with systemic lupus erythematosus (SLE), discoid LE (DLE), and various dermatoses were tested by the direct fluorescent antibody technique for the band of localized immunoglobulins at the dermal-epidermal junction present in LE skin. In LE, three immunofluorescent band patterns were found: homogeneous, thready, and stippled. The homogeneous or solid band was seen only in chronic atrophic or hyperkeratotic lesions while the thready band was present in newer erythematous edematous lesions and clinically normal SLE skin. The stippled band was found essentially only in clinically normal SLE skin even in SLE patients without LE skin lesions. Awareness of the different immunofluorescent "band" patterns that may occur at the dermal-epidermal junction in LE skin is essential in using the presence of the band as a diagnostic adjunct to confirm a clinical diagnosis of LE possibly even in patients without LE skin lesions.


Indirect cutaneous immunofluorescence

II Clinical significance

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Sera of 532 patients with bullous diseases, connective tissue diseases and malignancies were tested for pemphigus epidermal intercellular fluorescence (ICF) and for the bullous pemphigoid `tubular' band by the indirect fluorescent antibody technique. Human normal skin cryostat sections were used.
The band and ICF were seen primarily only in bullous pemphigoid and pemphigus respectively. Some indirect band and ICF-negative patients demonstrated positive direct results in involved skin, suggesting that direct tests should be performed in indirect negative patients clinically thought to have pemphigus or bullous pemphigoid.

No close correlation was found between disease activity and positive or negative indirect tests in bullous pemphigoid and pemphigus. Steroids did not interfere with positive results of this diagnostically extremely valuable test.

Large speckle-like thready and thready antinuclear antibody patterns as markers for different clinical presentations in lupus erythematosus

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Abstract

Fifty-one patients with lupus erythematosus were studied retrospectively. They were chosen on the basis of their antinuclear antibody (ANA) immunofluorescent pattern. Only those with the thready or the large speckle-like thready patterns were studied. Autoantibody profiles consisting of ANA, anti-single-stranded deoxyribonucleic acid (ssDNA) antibody, and anti-extractable nuclear antigen (ENA) antibody determinations were obtained. The patients with the thready ANA pattern and anti-ENA (Sm) antibodies had a significantly higher incidence of pulmonary, joint, and renal involvement than the anti-ENA-negative patients with the large speckle-like thready pattern. There was also a significantly higher incidence of Raynaud’s phenomenon in patients with the thready pattern than in those with the large speckle-like thready pattern. Photosensitivity was seen significantly more frequently in the patients with the large speckle-like thready pattern than in those with the thready pattern.

Antinuclear Antibodies (ANA): How Useful Is the ANA Test Today?

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Antinuclear Antibodies (ANA)

How Useful Is the ANA Test Today?

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The usefulness of today’s antinuclear antibody (ANA) test is best divided into two categories: diagnostic and prognostic.

Diagnostic Significance

Since Beck’s description of three patterns of nuclear immunofluorescence in 1961,1 many other patterns have been identified.2-4 Several of these patterns were found to be associated with certain connective tissue diseases, leading to their employment as diagnostic tests to confirm the clinical diagnoses of these diseases. The shrunk peripheral general and peripheral general (Fig. 1) patterns confirm a clinical diagnosis of systemic lupus erythematosus (SLE).2,4 These patterns frequently are accompanied by anti-DNA antibodies and kidney involvement.6 On serum dilution, these patterns convert to homogeneous fluorescence,3 changing sequentially from shrunk peripheral to peripheral to homogeneous fluorescence. Only a titer of 160 or greater of the general homogeneous pattern (Fig. 1) is significant for a connective tissue disease, except for dermatomyositis, where such a titer is generally not found. A diagnosis of dermatomyositis is virtually excluded in a patient with such a homogeneous titer. In fact, the ANA test is one of the most useful tests in the differential diagnosis between SLE and dermatomyositis. In an acutely ill patient not on immunosuppressants with such a differential diagnosis, a negative or nonsignificant ANA test result virtually excludes the diagnosis of SLE and strongly suggests a diagnosis of dermatomyositis. Along these lines, a consistently negative ANA test excludes the diagnosis of active SLE in a patient not on immunosuppressants.

The thready pattern2 also confirms a clinical diagnosis of SLE, although it may occasionally be found in scleroderma but not in rheumatoid arthritis.3

Nucleolar fluorescence has been found to be seen most frequently in scleroderma.5 This has been substantiated in that the nucleolar pattern does indeed confirm a clinical diagnosis of scleroderma.3

The true speckled-anticentromere pattern6-7 also confirms a clinical diagnosis of scleroderma; like the nucleolar pattern, it is not found in LE.8 The true speckled-anticentromere pattern is seen primarily in scleroderma6 and in its mostly benign form, the CREST syndrome (calcinosis, Raynaud’s phenomenon, esophageal dysmotility, telangiectasia).7

The leukocyte-specific ANA (LSANA) pattern, like the peripheral homogeneous general system, may be shrunk peripheral, peripheral, or homogeneous. This antibody is demonstrated only by granulocytic nuclei. LSANA is seen in drug-induced SLE-like syndromes such as the progestin syndrome,8 RA, Felty’s syndrome,9 LE, and, rarely, scleroderma. Only peripheral LSANA or a homogeneous titer of 640 or greater are significant for SLE, progestin-induced SLE-like syndrome or RA although titers below this do not rule out these diagnoses.

Internal malignancy may also be considered when a test is consistently positive1,10 if a connective tissue disease, family history, chronic active hepatitis, or a drug reaction are ruled out and no medications (such as hydralazine and progestin) were taken associated with positive ANA tests.8

Prognostic Significance

Recently, ANA patterns and the combination of ANA results and other tests for autoantibodies comprising serologic profiles have been shown to serve