

The role of anti-nuclear antibody indirect immunofluorescence pattern and titration in determining diagnosis of systemic rheumatic autoimmune

Asrul Abdul Wahab, Muhammad Syafiq Mohd Razi, Yarsheny Sugumaran, Nurul Atiqah Mohd Haniz, Khanisa Khilmie, Amalia Hameera Osmera

Faculty of Medicine, Universiti Kebangsaan Malaysia

ABSTRACT

Background: The purpose of this study was to determine the correlation between ANA-IIF pattern and titration for the diagnosis of SARDs. **Methods:** A retrospective study was conducted over six months period. All positive ANA-IIF samples were included from patients aged 18 years and above for further analysis. The pattern and titration for ANA-IIF were recorded for each patient. Determination of ANA-IIF pattern and titration was analysed on the NOVA View® platform. The titration was performed at 1:80, 1:160, 1:320 and 1:640 dilution. The last positive dilution was taken as the titer for respective sample. The demographic data and final diagnosis of each patient were retrieved. **Results:** A total of 105 patients were included for analysis. The majority of the patients were female (80%) and from Malay ethnicity (66.7%). The mean age was 53.75 years +/- 16.79. Majority of the patients had ANA-IIF titration 160 and less (N=63, 60%). The speckled was observed in 58 patients (55.2%) followed by homogeneous in 34 patients (32.4%). Eighteen patients (17.1%) were finally diagnosed with SARDs. The titration of at least 320 and homogeneous pattern were significantly associated with SARDs ($p < 0.0001$). Patients diagnosed with SARDs were significantly younger with mean age of 38.33 years +/- 3.42 ($p < 0.001$). Similarly, those with titration of at least 1:320 were younger than those with lower titration (mean age 46.14 versus 56.66 years, $p = 0.04$). Multisystemic involvement was significantly associated with the final diagnosis of SARDs ($p = 0.14$) but not with ANA-IIF titration of at least 1:320 ($p = 0.06$). **Conclusion:** ANA-IIF titration of equal or more than 1:320 and homogeneous pattern were significantly associated with SARDs diagnosis, and this association was perhaps more important in younger patients.