Key Summary of Conference Abstract

Variability in ICAP (International Consensus on ANA Patterns) Pattern Reporting in Testing for Antinuclear Antibodies (ANA) by Indirect Immunofluorescence Assay (IFA): a Survey of Participants in the College of American Pathologist’s (CAP) Proficiency Testing Program

Background

- Nuclear and cytoplasmic fluorescence patterns detected in indirect immunofluorescence assays (IFAs) for antinuclear antibodies (ANA) suggest certain types of autoimmune diseases.1,2
- The International Consensus on ANA Patterns (ICAP) established nomenclature for ANA IFA patterns and defined the level of ability (competent or expert) needed to identify and interpret them.2,3
- The extent of adoption of this nomenclature by clinical laboratories in reporting ANA IFA results is not known.
- Objective: The investigators conducted a survey of ANA IFA pattern reporting practices and use of an internal fluorescence intensity standard in ANA IFAs among clinical laboratories.

Methods

- Laboratories that participated in the College of American Pathologists Proficiency Testing programs for ANA in 2016 were sent a survey to assess pattern reporting practices and use of an internal fluorescence intensity standard in the assay.

Results

- A total of 638 respondents indicated they perform ANA IFAs and report a fluorescence pattern; the percentage reporting competent-level nuclear patterns ranged from 42% for nuclear dots to almost 100% for nucleolar.
- Pattern reporting varied for other cellular components:
  - 18% of respondents report nuclear envelope patterns (all expert-level patterns).
  - From 10% (for polar) to 69% (for golgi) of respondents report competent-level cytoplasmic patterns.
  - From 32% (for lysosomal) to 59% (for spindle apparatus) of respondents report expert-level cytoplasmic patterns.
- Of 519 respondents who report types of nuclear speckled patterns
  - 29% report dense fine speckles (competent-level pattern).
  - Up to 48% report other competent and expert-level patterns.
- 54% of respondents use an internal fluorescence intensity standard in their ANA IFA assay.

Conclusions

- Clinical laboratories use variable practices to report ANA IFA fluorescence patterns.
- Reporting of cytoplasmic patterns is more limited than is reporting of nuclear patterns.
- Variability in pattern reporting may be due in part to the failure of almost half of clinical laboratories to use internal fluorescence intensity standards in their ANA IFAs.

Poster Presentation at the 17th Annual Meeting of the Federation of Clinical Immunology

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References