ANA Testing – Costly misuse of a clinical tool

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Introduction

ANA is an autoantibody associated with several autoimmune conditions. 3-15% of healthy individuals are ANA positive; the incidence increases with age. Ordering ANA tests for the correct indication is essential. Lack of knowledge and poor interpretation of testing can result in over requesting of ANAs. Misuse increases the demand placed on laboratory staff and resources.

Aim

To assess compliance with set international guidelines from the American College of Rheumatology for ANA testing, in particular looking at indications and re-tests.
To implement change locally resulting in improved patient care and safety.

Standard

The American College of Rheumatology have clear indications outlined for ANA testing. (See Fig. 1)

Methods

We performed an audit of all inpatient and outpatient ANA tests requested from our laboratory over a 1 month period, giving a sample size of 23. Our primary aim was if ANA testing was indicated and if retesting was completed. We then performed a cost analysis of the additional expense placed on the laboratory from repeated tests.

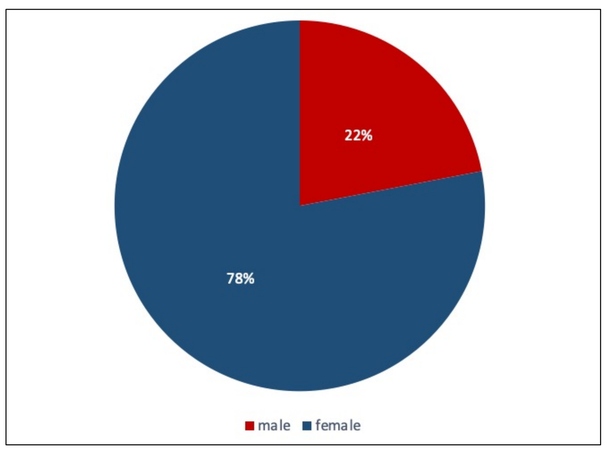

Fig.2

Indications

Clinical features suggestive of:

- Connective tissue diseases such as;
  - Systemic Lupus Erythematous
  - Sjogren's syndrome
  - Scleroderma
  - Polymyositis/Dermatomyositis
- Other;
  - Autoimmune liver disease
  - Autoimmune neurologic disease

Fig.1

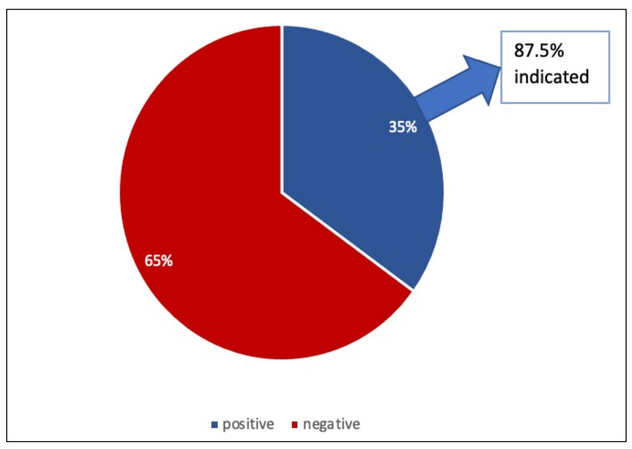

Fig.3

Results

Our study population (23) was 78% female with a mean age of 48(19-88).(See Fig.2) 35% of the cohort tested yielded positive ANA results with 87.5% of the positive results meeting ACR indications for ANA testing. (See Fig.3)

65% of our patient group yielded negative results with 66% of this group meeting ACR standards for testing. This meant that overall, **27% of our sample didn't meet the requirements.**

61% had inappropriate repeat ANA testing within the 4 week period examined. The estimated additional cost to our laboratory department was **€5160**, extrapolated to a 12 month period, this represents over **€60,000** for inappropriate repeated ANA testing.

Conclusion

Our findings led to virtual education sessions with staff in the hospital. We changed the system for ordering ANA's, giving the laboratory staff the authority to reject repeated ANA testing. We plan to deliver teaching to our colleagues in the community as 22% of tests were requested from general practitioners. We aim to assess the cost savings and impact on clinical practice with a re-audit next year.

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