Choosing Wisely Canada

ANA and ANCA Testing in a Tertiary Health Centre in Sherbrooke: An Assessment of the Adherence to Guidelines and the Impacts on the Diagnosis and Health Care System

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Objectives: To describe antinuclear antibodies (ANA) and subserology ordering practices and to determine if their indications meet the recommendations for ANA testing at the Sherbrooke University Health Centre. To describe antineutrophil cytoplasmic antibodies (ANCA) testing practices and determine if they meet the current recommendations proposed for ANCA testing, at the same centre.

Methods: Patients who had ANA and subserologies (Anti-SSA, anti-SSB, Anti-Jo1, Anti-Scl-70, Anti-Sm, Anti-U1 RNP) between 2012 and 2014 were found by means of a computerized system and their charts were analysed. We identified the indications for the ANA and subserologies panel in the medical notes and compared them to the guidelines for ANA testing and the Choosing Wisely Canada recommendations. Moreover, the indications for ANCA tests were assessed and compared to the current guidelines for the appropriate testing of ANCA and the Choosing Wisely Canada recommendations. Variables included gender, age, ANA titer, subserologies panel, indication of ANA, ANCA > 1:20, subtypes MPO and PR3, indications for ANCA, medical specialty, setting of the order and the final diagnosis.

Results: There were a total of 268 ANA tests included. In 35.8% of cases (n=96), ANA was ordered as per recommendations, versus 63.8% of cases (n=171) without indications. There were 104 subserologies ordered and 55.8% were ordered at the same time as the ANA, against the Choosing Wisely Canada recommendation of 2013. Almost half of the subserologies ordered had no indications of ANA in the first place (48.1%). The three medical specialties that ordered ANA the most were rheumatology, gastroenterology and internal medicine (in descending order). A total of 134 ANCA tests were included. Of these, 51.5% were ordered in line with the recommendations, 20.1% not meeting recommendations, and 28.4% for follow-ups. In fact, 44.4% of those not meeting the recommendations (n=12) were done because of clinical suspicion of inflammatory bowel disease or sclerosing cholangitis. Clinical remission of subjects with ANCA was evident in 100% of cases, even before ordering the ANCA test for follow-up (negative predictive value). Only 20% of ANCAs'results influenced the subsequent management.

Discussion: These results show that the rate of ANA and ANCA tests ordered in line with the recommendations remains low. Many ANA subserologies are ordered at the same time as the ANAs. However, the ANA and ANCA tests that were ordered without stated recommendations can still have reasonable indications to be measured in complicated cases, for example. Moreover, some of the patients that were hospitalized had ANA and serologies done together to save time, which is understandable. ANCA can be found in other non-vasculitic disorders and help the diagnosis for inflammatory bowel disease, primary sclerosing cholangitis and autoimmune hepatitis. Taking that into consideration, indications for these tests should be individualized for a hospitalized versus an ambulatory patient, and clinical presentation. The cost for ANA and serologies tests ordered without suggested indication was more than three thousand dollars in the time period studied and almost two thousand dollars for ANCA tests. These costs don't include indirect costs of more investigations, more medical consultations, visits and patients' anxiety.

Conclusion: In summary, too many ANA subserologies are ordered at the same time as the ANAs. These orders have an important cost for the health care system that can be lowered by providing more education for professionals on avoiding unnecessary tests. Clinical assessment rather than ANCA testing should guide treatment changes especially when patients are in remission.

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