Relapse-free survival was significantly longer for patients who positivity for 122 (79.2%) and PR3-ANCA for 102 (66.2%) of them. (67.5%) patients suffered 154 clinical relapses associated with cANCA- became undetectable by IF for 70/115 (60.9%) patients and ELISA for and 3 at relapse. Remission was obtained in 112 (88%) patients. ANCA lung (69%), kidney (45.2%), with median BVAS/WG of 7 at diagnosis.

Results

Introduction

Our objective was to evaluate the relevance of monitoring PR3-ANCA relapses by measuring of ANCA titers remains a source of debate. Risk factors of relapse were assessed using a conditional approach. Best discriminant functions can present with positive results. Our aim was to know the diagnostically useful ANCA in a nationwide respiratory referral centre.

Methods

All patients with suspicion of AASV were prospectively and consecutively included. Sample size calculation was done according to Flahault et al. [1]. Intrinsic properties of the tests were evaluated, and results of IIF (cutoff ≥ 1.20) and direct ELISA (≥ 20 U/mL, as per manufacturer’s cutoff) were compared by estimation of areas under the curve (AUC). Diagnosis of an AASV was established by clinical and histopathological data. Serology was performed in duplicate without knowledge of clinical data by lab personnel according to manufacturer (Euroimmun).

Results

Ninety-eight patients, 23 AAV (14 GPA, eight MPA, one EGPA), 75 disease controls. Test properties are shown in the table (table I), according to diagnostic categories. Regarding AUC of IIF and ELISA, there were no differences between P-ANCA vs MPO-ANCA or C-ANCA vs PR3-ANCA overall, nor when specific diseases were compared, except for MPA, in where the AUC for MPO-ANCA was higher than IIF (90% vs 82%, P = 0.05).

Discussion

Considering interpretation of IIF done by expert personnel, automated tests feasibility and characteristics of centres in where ANCA are ordered and performed, from our results, we can advise for either test to be used diagnostically in a referral centre where patients have respiratory symptoms in a high percentage. For MPA, ELISA may be better to use initially.

Conclusion

Our results can lead to test optimisation and recommendations in referral units in our country. Both assays performed equally in

References


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P3 Are anti-proteinase-3 ANCA a useful marker of granulomatosis with polyangiitis relapses? Results of a longitudinal study on 126 patients

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Introduction

Predicting granulomatosis with polyangiitis (GPA) relapses by measuring of ANCA titers remains a source of debate. Our objective was to evaluate the relevance of monitoring PR3-ANCA titers for GPA management.

Methods

This retrospective study included 126 patients recruited from Cochin Hospital, all fulfilling the 1990 ACR criteria for GPA and PR3-ANCA-positive at the time of diagnosis. GPA activity was assessed with the Birmingham Vasculitis Activity Score for Wegener granulomatosis (BWAS/WG). ANCA were detected in an immunofluorescence assay and their PR3-ANCA specificity was determined in an ELISA. Risk factors of relapse were assessed using a conditional Andersen–Gill model. Hazard ratios (HR) [95% confidence interval (CI)] are given.

Results

For the 126 patients (51.6% male, mean age 49 yr), the vasculitis organ-involvement distribution at inclusion was ENT (82.5%), lung (69%), kidney (45.2%), with median BWAS/WG of 7 at diagnosis and 3 at relapse. Remission was obtained in 112 (88%) patients. ANCA became undetectable by IF for 70/115 (60.9%) patients and ELISA for 90/115 (78.3%). After a median follow-up of 70 months, 85/126 (67.5%) patients suffered 154 clinical relapses associated with cANCA- positivity for 122 (79.2%) and PR3-ANCA for 102 (66.2%) of them. Relapse-free survival was significantly longer for patients who remained cANCA-negative (HR 0.67 [95% CI 0.47–0.98], P = 0.037) and PR3-ANCA–negative (HR 0.60 [95% CI 0.39–0.92], P = 0.02). When we studied evolution in ANCA titers course and clinical outcome for each patient, a tight parallelism was observed for 60% of them, i.e. each relapse was associated with ANCA-positivity and relapse-free survival with persistent ANCA-negativity.

Conclusion

ANCA alone cannot be considered a reliable marker of GPA remission.

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P4 Results of ANCA standardisation and their diagnostic usefulness in ANCA-associated vasculitides (AASV) in a respiratory referral centre in Mexico

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Introduction

ANCA have been fundamental for recent advances in primary small-vessel vasculitides, and are a valuable diagnostic tool. However, their standardisation has been difficult and other conditions can present with positive results. Our aim was to know the diagnostic usefulness of ANCA in a nationwide respiratory referral centre.

Methods

All patients with suspicion of AASV were prospectively and consecutively included. Sample size calculation was done according to Flahault et al. [1]. Intrinsic properties of the tests were evaluated, and results of IIF (cutoff ≥ 1.20) and direct ELISA (≥ 20 U/mL, as per manufacturer’s cutoff) were compared by estimation of areas under the curve (AUC). Diagnosis of an AASV was established by clinical and histopathological data. Serology was performed in duplicate without knowledge of clinical data by lab personnel according to manufacturer (Euroimmun).

Results

Ninety-eight patients, 23 AAV (14 GPA, eight MPA, one EGPA), 75 disease controls. Test properties are shown in the table (table I), according to diagnostic categories. Regarding AUC of IIF and ELISA, there were no differences between P-ANCA vs MPO-ANCA or C-ANCA vs PR3-ANCA overall, nor when specific diseases were compared, except for MPA, in where the AUC for MPO-ANCA was higher than IIF (90% vs 82%, P = 0.05).

Discussion

Considering interpretation of IIF done by expert personnel, automated tests feasibility and characteristics of centres in where ANCA are ordered and performed, from our results, we can advise for either test to be used diagnostically in a referral centre where patients have respiratory symptoms in a high percentage. For MPA, ELISA may be better to use initially.

Conclusion

Our results can lead to test optimisation and recommendations in referral units in our country. Both assays performed equally in
Methods quantify the incidence of antibody switching. The incidence of change is not reported. The aim of this study was to sometimes changes. Published data is limited to case reports and ANCA. Typically, PR3/MPO-ANCA are both performed as specificity pending. We are evaluating such issue currently. Reference [1] Flahault A, Cadilhac M, Thomas G. Sample size calculation should be performed for design accuracy in diagnostic studies. J Clin Epidemiol 2005;58:859-62.

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P5 Incidence of PR3- and MPO-ANCA autoantibody specificity changes in ANCA associated vasculitis

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Introduction.– Monitoring of ANCA associated vasculitis (AAV) in remission usually includes indirect immunofluorescence (IIF) and PR3/MPO-ANCA. Typically, PR3/MPO-ANCA are both performed as specificity sometimes changes. Published data is limited to case reports and incidence of change is not reported. The aim of this study was to quantify the incidence of antibody switching.

Methods.– We serve a population of 720,000. IIF is used with reflex PR3/MPO-ANCA if positive or ANA present. Both tests are performed if previously positive. We reviewed all ANCA results from January 2000 to August 2012. A total of 22,002 IIF screens (14,518 patients) were performed. 9,838 also had both PR3/MPO-ANCA (6439 patients). Patients that changed specificity from PR3- to MPO-ANCA and vice versa were identified and case notes reviewed.

Results.– Two hundred and fifty patients positive for PR3/MPO-ANCA were followed for a mean of 2.4 years (range < 0.1 to 12.4 years; with 177 patients followed for > 90 days). Five patients (2%) changed antibody specificity during follow up (three GPA, one MPA & one AGP). In two of these patients this was associated with relapse. The incidence of specificity change was one per 66 years (including reversion to original specificity) and one per 199 years if only events associated with a rising CRP/relapse are considered.

Discussion.– In the five cases, we observed two were associated with relapse (and raised CRP). In two further patients switching was at low level, transient and was not considered clinically significant. If only the original antibody specificity was used in monitoring patients we would have missed a clinically significant event once every 199 patient years. Conclusion.– We have shown that antibody specificity changes in AAV are rare. We show that monitoring using only the initial antibody specificity would have resulted in missed clinical events but CRP presaged relapse in these cases. Decisions on the optimum monitoring strategy require assessment of cost and benefit.

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P6 Multi-center evaluation of a novel chemiluminescent rapid assay for the detection of PR3-ANCA

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7. University of Lubeck and Clinic Bad Bramstedt, Department of Rheumatology, Bad Bramstedt, Germany
8. University of Calgary, Department of Medicine, Calgary, Canada
9. Jagiellonian University Medical College, Department of Medicine, Krakow, Poland
10. University Hospitals Leuven, General Internal Medicine, Leuven, Belgium
11. University Hospitals Leuven, Department of Microbiology and Immunology, Laboratory Medicine, KU Leuven, Leuven, Belgium

Introduction.– Anti-PR3 antibodies represent an established and widely applied marker for the diagnosis of small vessel vasculitis, such as granulomatosis with polyangiitis (GPA). This multi-center study was designed to critically analyze the performance of QUANTA Flash PR3, a chemiluminescent immunoassay (CIA) on a random access rapid response (30 min) auto-analyzer for the detection of anti-PR3 antibodies, by testing a large number of samples from multiple clinical sites, selected samples in comparison to EliA PR3s (Thermo Scientific).

Methods.– Sera from 292 GPA patients and other diseases (n = 1356) were collected from 11 different laboratories in multiple countries (Germany, Italy, The Netherlands, Slovenia, France, Canada, Belgium, Poland, Austria) and tested by QUANTA Flash PR3. A total of 196 samples from two sites were also tested by EliA PR3.

Table I

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<th>AASV</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>Positive predictivity value</th>
<th>Negative predictivity</th>
<th>Positive likelihood ratio</th>
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<th>AUC</th>
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