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Autoimmune diseases - Allergy

Cod: M145

THE INTERFACE OF ELEVATED TRYPTASE LEVEL AND ALLERGEN-SPECIFIC IMMUNOGLOBULIN E ANTIBODIES

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BACKGROUND. The elevated tryptase level in the blood is not only one of the most important markers of anaphylactic reactions, but also diagnostic marker of mastocytosis. The aim of the study was to evaluate the prevalence and interface of increased tryptase level and allergen-specific immunoglobulin E (IgE) antibodies.
METHODS. Venous blood serum samples from 60 adult patients (45 ± 8 years old) were analyzed in the study. The patients were grouped according to the diagnosis and tryptase levels: 1st group (n=20) – patients with anaphylactic reaction, tryptase level ≥11.4 g/L, 2nd group (n=20) – patients with mastocytosis, tryptase level ≥ 20.0 g/L, 3rd control group (n=20) – atopic patients, tryptase level <11, 4 g/L. Tryptase concentration was detected by ELISA (ImmunoCAP, ThermoScientific, Finland). Allergen-specific IgE antibodies were investigated by immunoblot assay (Hitachi Chemical Diagnostics, Inc., Japan).
RESULTS. Allergen-specific IgE antibodies were found in 73% of cases overall, with the incidence 90% in atopic patients, 75% in anaphylaxis group and 55% in mastocytosis group. It were found the most common inhalant allergen-specific IgE antibodies to timothy grass (43.2%), birch (25%), cat epithelium (20.5%), dust mite (18.2%) and mugwort (15.9%). The most common food allergen-specific IgE antibodies were detected to peanuts and shrimps – 13.6% of cases. Sensitization to two or more different allergens was found with statistically significant difference in the groups: 53.3% in anaphylaxis group, 75% in mastocytosis group and 33.3% in atopic patients group. Inhalant allergen-specific IgE antibodies were found 90% of cases in the atopic group, while food allergen-specific IgE antibodies were found 70% of cases in the anaphylaxis group statistically significantly frequently.
CONCLUSIONS. Based on the results of the study it can be concluded that there is no correlation between allergen-specific IgE antibodies and increased tryptase level. Each individual tryptase concentration and sensitization to allergens was varied and different, so each patient should be studied individually.

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Autoimmune diseases - Allergy

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A RARE CASE REPORT OF A POLYSPECIFIC SERUM

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Case report: 24 year-old man urgently hospitalised with haemoptosis

History:
Congenital aortic stenosis and aneurysm of the ascending aorta; replacement with a mechanical valve and graft in November 2014
Suspected diagnosis: Goodpasture syndrome (anti–glomerular basement membrane antibody disease = GBM) referring to clinically evident pulmonary haemorrhage without renal complictions. Differential diagnosis: Pulmonary and/or renal manifestations can be encountered in various conditions, such as antineutrophilic cytoplasmic antibody (ANCA)–positive vasculitis and other autoimmune disorders. As a consequence, the identification of anti-GBM antibodies in the patient's serum is of paramount importance in the diagnosis of Goodpasture disease.
Confirmation of the diagnosis of this rare autoimmune disorder occurred through detection of circulating antibodies against an antigen normally present in the GBM and alveolar basement membrane (alpha-3 chain of type IV collagen).
Results: anti-GBM 200U/ml.
Notable was that PR3- und MPO were also highly elevated. Because of this mismatch an analysis was made with another producer of reagents and all the results were negative, consequently the first results were false positive and the therapy based on these results inadequate.
Conclusion: Polyspecific serum appears to have reacted with a component used by the first producer, probably against the blocking agent. To prevent nonspecific binding of the antibodies in the sampling preparation the remaining binding surface must be blocked before using antibodies to detect proteins that have been dotted or transferred to a membrane. Otherwise, the antibodies or other detection reagents will bind to any remaining sites that initially served to immobilise the proteins of interest. In principle, any protein that does not have binding affinity for the target or probe components in the assay can be used for blocking and it is imporatant to do so as every manufacturer uses another mixture.
It is a very rare instance that this usual approach of the assay's test performance causes an unwanted side-effect, i.e. to trigger a reaction instead of preventing it.
Possibly the antibodies of the patient were triggered by the device of the implanted graft/ valve.

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Autoimmune diseases - Allergy

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CHANGED PROFILE OF SERUM TRANSFERRIN ISOFORMS IN RHEUMATOID ARTHRITIS

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INTRODUCTION: Rheumatoid arthritis (RA) is a chronic, autoimmune disease of connective tissues. The specific autoantibodies generated in RA have been associated with the posttranslational modifications (including glycosylation) of proteins and peptides. Transferrin (TF), an iron-transporting N-glycoprotein is an optimal model for the analysis of the glycosylation profile in rheumatoid arthritis on the grounds of its microheterogenity. Therefore, the aim of the study was to assess the effect of rheumatoid arthritis on the serum profile of transferrin isoforms.
METHODS: Serum samples were obtained from 48 patients with rheumatoid arthritis. The patients tested were males (6) and females (42) (age range: 33-85 years). Control group consisted of 30 healthy volunteers. The samples were analyzed by capillary electrophoresis on MINICAP electrophoresis system. The normal serum transferrin isoforms are separated into five fractions according to their sialylation level: asialotransferrin, disialotransferrin, trisialotransferrin, tetrasialotransferrin and pentasialotransferrin.
RESULTS: There were significant differences in the relative concentrations in trisialo- (mean±SD; 2.130±1.112), tertrasialo- (83.640±3.165) and pentasialotransferrin (13.562±3.088) in patients with rheumatoid arthritis when compared to the control group (3.615±1.156; 76.840±5.621; 18.610±6.027, respectively) (U Mann-Whitney test: $P<0.001$ for all comparisons). There were no significant differences in the disialotransferrin concentrations in RA patients (0.681±0.862) and controls (0.984±1.161, $P=0.113$). Trisialotransferrin concentration correlated with RA activity expressed as DAS 28 in rheumatoid arthritis patients ($P<0.001$). Disialo-, tetrasialo- and pentasialotransferrin did not correlate with DAS 28 in RA patients. The low trisialotransferrin concentration is also associated with high PLT count and ESR ($P<0.001$ for both).
CONCLUSIONS: The current study showed the changes in the serum profile of transferrin isoforms in patients with rheumatoid arthritis that might reflect the activity of disease.

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Autoimmune diseases - Allergy

Cod: M148

A RARE CASE OF A PATIENT WITH AMPHIPHYSIN ANTIBODIES ASSOCIATED WITH SQUAMOUS CELL LUNG CARCINOMA

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Background: Limbic encephalitis (LE) is a paraneoplastic syndrome that is often associated with small cell lung cancer (SCLC), breast cancer and thymoma. The common clinical manifestations of LE are subacute onset, cognitive dysfunction, seizures and psychiatric symptoms. The main intracellular antigens related to limbic encephalitis are Hu, Ma2, and less frequently CV2/CRMP5 and amphiphysin.

Methods: A 79 years old man with behavioral disorders, seizures and fever was admitted to the Hospital. CT scan showed residual ischemic brain injury. The diagnosis was subacute encephalitis. However, the patient's condition deteriorated with aggressiveness and agitation. The patient was admitted in the Service of Neurology to study the origin (infectious, autoimmune or neoplastic) of the episodes of subacute encephalitis.

Results:
- Biochemistry study: LDH (696 U/L) and PCR (18.4 mg/dL), without significant alterations of the others parameters of the biochemistry. Normal thyroid function.
- Hematology study: without significant alterations.
- Tumor markers: NSE=27.3 ng/mL. AFP, CEA, CA-125, CA-15.3, CA-19.9, B-HCG and PSA in normal ranges.
- Microbiological analysis (Study of meningitis and viral encephalitis): PCR negative for Herpes simplex, Varicella-zoster, Toscana virus, Enterovirus.
- Autoimmune study: Antinuclear antibodies (ANA), DNA and ENAs screening: negatives.
- Onconeuronal antibodies: Positive anti-amphiphysin antibodies 1/100 and confirmed by immunoblot assay. The presence of this antibody is associated to paraneoplastic LE.
- Chest X-rays: Normal, without presence infiltrates or masses.
- Thoraco abdominal CT SCAN: Condensation at left lung and presence of adenopathies in mediastinum and abdomen suggesting lung carcinoma.
- Biopsy sample by bronchoscopy: A biopsy sample of bronchial fragments of the mucosa showed the presence of tumoral cells CK5/6+, P63+, TTF1- and CK7- associated to scamous cell lung carcinoma.
- Diagnosis of the patients: With previous findings, the diagnosis of the patient was paraneoplasic limbic encephalitis with anti-amphiphysin antibodies positives associated to scamous cell lung carcinoma.

Conclusions: The presence of anti-amphiphysin antibodies allows us to diagnose a scamous cell lung carcinoma. The paraneoplastic antibodies appear to be a useful tool for diagnosing a neurological disorder as paraneoplastic and for indicating the probable type of underlying tumor.

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Autoimmune diseases - Allergy

Cod: M149

CLINICAL SENSITIVITY AND SPECIFICITY OF AUTOANTIBODIES IN PATIENTS WITH RECENT ONSET ARTHRITIS

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Background: Rheumatoid arthritis (RA) is a systemic inflammatory autoimmune disease characterized by chronic polyarthritis. In 2009, the new RA criteria released by the American College of Rheumatology (ACR) and the European League Against Rheumatism were revised to include the measurement of anti-CCP antibodies to aid in the classification of RA. The aim of our study is to evaluate the diagnostic value of antibodies in primary care in patients with suspected RA to be remit to a specialist in Rheumatology.

Material and methods: Anti-CCP antibodies and rheumatoid factor (RF) were measured in 211 patients with suspected RA. The ACR criteria for RA were fulfilled for 106 patients. We study the diagnostic value (sensibility, specificity, positive predictive (PPV) value and negative predictive value (NPV)) for anti-CCP antibodies, RF and their combinations "anti-CCP and RF" and "anti-CCP or RF".

Results:

Anti-CCP: sensitivity 66%, specificity 98%, PPV 95% NPV 82%
Anti-CCP and FR: sensitivity 60%, specificity 98%, PPV 94% NPV 80%
Anti-CCP or FR: sensitivity 86%, specificity 81%, PPV 74% NPV 90%
FR: sensitivity 81%, specificity 81%, PPV 73% NPV 87%

Conclusion: In primary care, the combination "anti-CCP or RF" exhibits the better diagnostic value with the higher sensitivity than the others combinations.

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Autoimmune diseases - Allergy

Cod: M150

THE NEW TEST FOR MONITORING ANTI-TNF APLHA THERAPY: FROM LABORATORY TO THE CLINICAL PRACTICE

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Background. Biological agents for anti-TNFα therapy have improved the treatment of autoimmune diseases. However, there are patients who do not respond to the therapy or show reduced drug efficacy because of anti-drug antibody formation (ADA).
We evaluated the tests for individual monitoring of anti-TNFα therapy and the relationship between ADA and IFX serum levels, ADA and clinical response, ADA and autoantibodies.
Methods. We enrolled patients treated with Infliximab (IFX) both naive and trough a follow-up program and affected by selected rheumatology and gastroenterology diseases. Sera were analysed for IFX, total anti-drug antibodies (Total-ADA), free anti-drug antibodies (Free-ADA) serum levels and specific autoantibodies.
Results. 79 samples were analysed: Total-ADA were detected in 26 rheumatology samples and 21 gastroenterology patients. Serum IFX levels were significantly lower in Total-ADA positive patients (p=0.01 for rheumatology group and p=0.02 for gastroenterology group). A treatment failure was observed in 7 rheumatology samples and in 15 gastroenterology samples. We detected Total-ADA serum levels higher in patients with treatment failure in both groups (p=0.01 and p=0.001 respectively). We did not found a significant association between the presence of Total-ADA and other autoantibodies. Free-ADA were tested only in 27 rheumatology patients and results showed a significant correlation with clinical response (p=0.006).
Conclusion. The correlation with clinical outcome indicate that the presence of ADA could interfere with efficacy of therapy. Our study suggest that data from laboratory tests can assist clinicians in their therapy selection and the introduction of these tests should be considered for routine biological therapy monitoring of autoimmune diseases.

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Autoimmune diseases - Allergy

Cod: M151

POSITIVE ANTI-CCP IN PATIENTS WITH NEGATIVE RHEUMATOID FACTOR IN RHEUMATOID ARTHRITIS

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INTRODUCTION
Anti-cyclic citrullinated peptide (anti-CCP) is an antibody present in patients with rheumatoid arthritis. Levels of anti-CCP can be detected in a patient through a blood test. A positive anti-CCP test result can be used in conjunction with other blood tests, imaging tests, and physical examinations to reach a Rheumatoid Arthritis diagnosis. Positive Anti-CCP is part of ACR/EULAR 2010 classification criteria.

OBJECTIVES:
Our study aimed to analyze Positive Anti-CCP importance in diagnosis and follow-up of patients with Rheumatoid Arthritis whose inflammatory blood tests [especially Rheumatoid Factor (RF)] were found to be negative, despite their clinical features.

METHODS:
This is an observational study which includes 69 patients from which 62 females and 7 males diagnosed with Rheumatoid Arthritis. Forty-one (59.4%) patients were found with positive RF and 28 (41.6%) with negative RF. In those patients whose RF was found to be Negative, 11 patients had positive Anti-CCP (39.28%)

CONCLUSIONS:
In patients with Rheumatoid Arthritis it is very important to evaluate the values of ACPA (Anti-CCP), especially in patients with negative RF, to determine the gravity and the treatment pathways.

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Autoimmune diseases - Allergy

Cod: M152

INCIDENCE OF CELIAC DISEASE IN ADULTHOOD IN OUR POPULATION.

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Background:
Celiac disease (CD) is an autoimmune process known etiology, which primarily affects the digestive tract.
It is characterized by the existence of chronic inflammation of the mucosa of the small intestine, which may result in very different clinical symptoms. It can occur at any age of life, both in children as in adults, becoming increasingly frequent cases diagnosed at advanced ages (up to 20% over 60 years). Its average prevalence is around 1% of the general population.
The type of clinical presentation is highly variable and depends on various factors such as patient age, degree of sensitivity to gluten and quantity of gluten ingested through diet and other factors unknown at the moment.
In Serology it is used routinely to determine the anti-tissue transglutaminase (TGA) anti-IgA antibody carried out by ELISA with high sensitivity and specificity (80-95%).

Objective:
Calculate new patients diagnosed with celiac disease in the adult population and determine the incidence in our hospitalary area.

Method:
Through systematic statistical Modulab program, we obtain the total of positive transglutaminase (IgA) (we considered values higher than 15 mg/dL as positive screening) in patients older than 20 years old.

Results:
We analyzed a total of 15818 samples during 2015, of which 1740 samples were TGA higher than 15 mg/dL. Of these positive samples, 193 were patients between 20 and 84 years of age (11% of all patients).The incidence obtained was 1: 16666.
We obtained 56% of newly diagnosed patients were between 20 and 39 years. 26% between 40 and 49 years, 15% were diagnosed exceeding 50 years.

Conclusions:
The worldwide prevalence of celiac disease is estimated at 1: 266 cases. In Spain the prevalence 1:118 in the childhood and 1:389 in the adulthood, the incidence is 1: 7,528 cases in children and 1: 38,927 cases in the adult population.
In our area, the incidence of celiac disease in adult patients is higher than Spanish average.
At present in our area, we obtained 41% of new diagnoses in subjects older than 40 years old.
That suggests that we need to made a nearly detection protocol in children.

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Autoimmune diseases - Allergy

Cod: M153

COMPARISON OF TWO PERFORMANCE EVALUATION METHODS FOR QUANTITATIVE TGAb AND TPOAb RESULTS IN EXTERNAL QUALITY ASSESSMENT SCHEME

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Introduction

The aim of this study was to compare two performance evaluation methods for quantitative results in thyroid gland antibody external quality assessment (EQA) scheme. The scheme includes qualitative and quantitative test results for thyroid gland and thyroid peroxidase antibodies (TgAb and TPOAb). Although qualitative results are most important when performances are assessed, the interest for evaluation of quantitative results is increasing.

The EQA performance of participants is traditionally assessed using the total error (TE) approach. Target limits = assigned value ± TE %. Performance is presented using the difference (Diff %) of the measured result from the method-specific assigned value (x_{pt}, participants' results mean) and the performance is acceptable when within the target limits. TE % has been set to 20 for both analytes.

The other possibility of assessing participant performance is the z-score approach. The z-score is calculated as $z = (x - x_{pt}) / s$, where x is participant's result and s is the standard deviation of the method group. The performance is regarded to be satisfactory when $|z| \leq 2$, questionable when $2 < |z| < 3$, and unsatisfactory when $|z| \geq 3$.

Methods and results

The scheme includes 3 annual rounds, 2 samples per round. 150−200 laboratories from 15 different countries participated in the scheme yearly. We evaluated EQA results from 2013 to 2015. Data includes 895 individual test results from two most widely used methods. We compared participants' performances according to TE and z-score methods.

77.2% of all quantitative results have been within the target limits, 12.1% below and 10.7% above when TE method was used. According to z-scores the performance has been satisfactory in 95.5% of results, questionable in 4.0% and unsatisfactory in 0.5%.

Conclusion

Comparing TE and z-score approach as an evaluating tool for EQA performance we have to keep in mind that in the TE approach the pre-set quality specification describes the desired performance whereas z-score is a measure of observed performance. The difference between these two approaches is also seen in this study. The z-score approach might give more acceptable results than the TE approach. The z-score seems to be more forgivable, and might give an over-optimistic impression of the performance.

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Autoimmune diseases - Allergy

Cod: M154

COMPARISON OF DETERMINATION OF ADALIMUMAB LEVELS BETWEEN TWO ENZYME IMMUNOASSAYS (PROMONITOR AND SANQUIN)

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BACKGROUND
Following the discovery of monoclonal antibodies that block the α tumor necrosis factor (TNF-α), it has been seen a breakthrough in the treatment of several diseases (rheumatoid arthritis, Crohn's disease, ulcerative colitis or psoriasis) coursing with a pro-inflammatory effect mediated by this cytokine.
Adalimumab (ADA) is a monoclonal anti-TNF-α indicated in some of these diseases, however, it is an expensive treatment, that has been found often no response occurs by some patients (between 25-30%) due to production of antibodies against drug.
Because of this, it has been proposed the utility of measuring blood levels of the drug, and the presence of antibodies against the same drug, to thereby try to predict the success or failure of treatment in the patient, in order to avoid spending inefficient resources and inconvenience to patients.
METHODS
The aim is to assess the transferability of results between the enzyme-linked immunosorbent assay (ELISA) of Sanquin® and Promonitor® for concentrations of Infliximab in a group of patients treated with the drug.
To quantify the concentrations of ADA, two different sandwich ELISA methods were used, following the manufacturer's instructions. 36 patients' serums were collected and frozen at -80 for later determination.To establish the correlation between methods, Passing-Bablok (including CUSUM test) was performed, using the statistical program MedCalc 13.3.3.0
RESULTS
The regression equation was as follows: Promonitor = 0,139189 + 0,770270Sanquin with an IC95% for the intercept of -0,4734 to 1,0578and an IC95% for the slope of 0,5759 to 0,9216. CUSUM test indicated no significant deviation from linearity (p = 0.96).
CONCLUSIONS
Regression includes 0 in the confidence interval for the intercept,but 1 is not included in the confidence interval for the slope, so it means there is a proportional error between the different methods. Hence, considering that Sanquin® method measures higher ADA levels than Promonitor® we suspect that this error could be due to this, but CUSUM test refuses this idea.

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Autoimmune diseases - Allergy

Cod: M155

THE SPECIFICITY OF ANTI-DFS70 PATTERN FOR THE BLOT-CONFIRMED ANTI-DFS70 RESULT

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Background: A broad range of clinical disciplines request ANA test and not all positive ANA results can be considered to be a marker for ANA-associated rheumatic disease (AARD). It has been proposed that testing for anti-DFS70 antibodies should be included into an ANA diagnostic algorithm in order to distinguish between AARD and other diseases. A typical anti-DFS70 staining pattern is recognized as a staining of dense fine speckles in the nucleus with a strong staining of mitotic chromosomes.
IIF is a subjective method and different people can give different interpretations to ANA patterns.
The aim of our study was to evaluate the specificity of the anti-DFS70 pattern in order to decide whether we need a blot containing anti-DFS70 antibody for each ANA positive case.
Method: We used the results from 618 immunoblots which combines the antigens nRNP/Sm, Sm, SSA, Ro52, SSB, Scl70, PM-Scl100, Jo1, CENP-B, PCNA, dsDNA, nucleosomes, histones, ribosomal P-protein, AMA-M2 and DFS70 (EUROLINE ANA Profile 3 plus DFS70, Euroimmun, Germany). We took the samples positive only for DFS70 and looked for the patterns and titers described for these results using IIF ANA on cells HEp-2 (Euroimmun, Germany).
Results: From 618 immonoblot tests 134 (21,7%) were positive for anti-DFS70. From these anti-DFS70 positive samples 106 (79,1%) were positive only for anti-DFS70. From these 41 (38,7 %) patterns were discribed as homogenous, 3 (2,8%) patterns as cytoplasmatic, 2 (1,9%) patterns as nuclear dots. Only 23,6% of patterns were described as anti-DFS70. ANA patterns were also described in different titers. Titer 1:1000 was discribed in 18,9 %, 1:320 in 41,5% and 1:100 in 39,6% of cases.
Conclusions: Although the anti-DFS70 pattern is rather typical, IIF pattern is not specific enought to decide whether to proceed testing only for anti-DFS70. We found it reasonable to proceed testing for anti-DFS70 together with other autoantibodies. The alternative could be proceed with a blot without anti-DFS70 and test the ANA IIF positive/blot negative samples for anti-DFS70 in order to be sure that ANA is not related with AARDS.

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Autoimmune diseases - Allergy

Cod: M156

DEVELOPMENT OF CERTIFIED REFERENCE MATERIALS FOR THE AUTOIMMUNE ANTIBODIES IGG PR3 ANCA AND IGG MPO ANCA

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The detection and quantification of IgG autoantibodies are important for the diagnosis and monitoring of many autoimmune diseases. For every autoantibody in routine use, there is marked diversity in the response of methods available for analysis and the calibrants used. Thus the production of materials used as calibrant is necessary.
A calibrant is required to have a metrologically traceable value, accompanied by an uncertainty statement (Directive 98/79/EC). The stability and homogeneity with respect to the certified property must be verified, and the calibrant must be commutable. These attributes are challenging for serum protein calibrants due to their complex nature.
This work, which is in collaboration with the Working Group for the Harmonisation of Autoantibody Tests of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), aimed at producing two serum protein reference materials intended for the standardisation of measurements of anti-myeloperoxidase and anti-proteinase 3 immunoglobulin G antibodies (IgG MPO ANCA and IgG PR3 ANCA respectively).
For the characterisation of the materials, calibration solutions were prepared and characterised. IgG MPO ANCA and IgG PR3 ANCA were purified from plasmapheresis materials by affinity and size exclusion chromatography. A value for the IgG concentration in both calibrants was assigned using turbidimetry and/or nephelometry selective for total IgG.
A value was assigned to the CRMs by using the purified calibrant spiked into human serum and routine procedures (ELISA, chemiluminescent and fluoroenzyme immunoassays). In the value assignment procedure dilutions of the target material were measured in parallel to equal number of dilutions of the calibrant. The concentration of the target materials was determined against the calibrant solutions. Every vial of the IgG MPO ANCA material (ERM-DA476/IFCC) contains 84 mg/L IgG MPO ANCA with combined uncertainty of 9 mg/L. An inter-laboratory comparison for the value assignment of the IgG PR3 ANCA material was successfully completed.
The availability of the certified reference materials should help to provide for routine methods for IgG ANCA measurements a common scale that is stable over time.

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COMPARISON OF VITAMIN D LEVELS IN PATIENTS WITH AUTOIMMUNE DISORDERS AND IN HEALTHY CONTROLS

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Background: Vitamin D plays an important role in the immune system, acting on the regulation and differentiation of lymphocytes, macrophages and natural killer cells, as well as interfering in the production of cytokines. Vitamin D deficiency has been related with several autoimmune disorders. The objectives of this study were (a) to determine the levels of vitamin D in patients with autoimmune disorders (both systemic and organ-specific) and in healthy controls and (b) to compare Vitamin D levels between the two groups.

Materials and Methods: The study included 100 patients (37 male and 63 female) and 40 healthy controls (10 male and 30 female) aged 30-65 years. Vitamin D measurements were performed on the Roche Elecsys fully automated analyzer with the Elecsys® Vitamin D total assay commercial kit (Electro-chemiluminescence binding assay -ECLIA).

Results: In the patients' group vitamin D levels ranged from 2,5 to 67,6 ng/mL (mean 23,02). In female patients vitamin D levels ranged from 2,5 to 67,6 ng/mL (mean 21,5). In male patients vitamin D levels ranged from 2,9 to 53,4 ng/mL (mean 25,6). The difference between male and female patients was not statistically significant (p-value =0,180; α=0,05). In healthy controls vitamin D levels ranged from 30,6 to 46,6 ng/mL (mean 38,2). The difference between patients and healthy controls was statistically significant (p-value<0.001; α=0,05).

Conclusions: Vitamin D deficiency is defined as vitamin D levels of ≤ 20 ng/mL, while Vitamin D insufficiency is defined as 21-29 ng/mL. In this study vitamin D deficiency was detected in 46,0% of patients and insufficiency in 20.0%. Healthy controls had normal vitamin D levels. The difference between patients and healthy controls was statistically significant, indicating a potential role of vitamin D in the pathogenesis autoimmune disorders.

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Autoimmune diseases - Allergy

Cod: M158

EFFECT OF IMMUNOGENICITY ON ANTI-TNFA RESPONSE

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Background: Tumor necrosis factor α (TNFα), a pro-inflammatory cytochin, plays a pivotal role in the pathogenesis of some autoimmune disease. TNFα is the target of 5 inhibitors agents: infliximab, adalimumab, golimumab, etanercept and certolizumab, neutralizing the TNFα effects. These monoclonal antibodies drugs are, also, immunogenic, and consequent anti-drug antibodies (ADA) formation can decrease the functional concentration of anti-TNFα resulting in a loss of response. Therefore, we evaluated the impact of ADA on therapeutic response.
Methods: We considered adult patients affected by Rheumatoid Arthritis, Ulcerative Colitis, Psoriatic Arthritis, Chron's disease and Ankilosing Spondylitis in therapy with TNFα inhibitors. We collected and about patients characteristics, treatment dosage and route of administration, determination of ADA and development of adverse events (AE). We combined data in meta-analysis, calculating risk ratios (RR) for each study. P-values <0.05 were considered as statistically significant. Analyses were performed with the RevMan 5.3.
Results: We analysed data about 5156 patients, of these, 1022 (20%) patients were ADA positive. Patients developed ADA had a significant reduction of response rate (RR 0.43, 95%CI 0.29-0.63) respect to patients without ADA. This effect is significant in patients treated either with infliximab (RR 0.43), either with adalimumab (RR 0.50). Furthermore, the administration of anti-TNFα produced reaction of infusion site in 13% of patients, infection in 27% and serious AE in 4% of patients.
Conclusion: Consistent part of evaluated patients developed ADA, reducing significantly drug response. In fact, ADA seems interfere with drugs compromising its effects. The determination of serum levels may be usefulness to lead to more appropriate therapeutic strategy, especially for patients with loss of response.

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Autoimmune diseases - Allergy

Cod: M159

COMPARISON OF DETERMINATION OF INFLIXIMAB LEVELS BETWEEN TWO ENZYME IMMUNOASSAYS (PROMONITOR AND SANQUIN)

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BACKGROUND
Following the discovery of monoclonal antibodies that block the α tumor necrosis factor (TNF-α), it has been seen a breakthrough in the treatment of several diseases (rheumatoid arthritis, Crohn's disease, ulcerative colitis or psoriasis) coursing with a pro-inflammatory effect mediated by this cytokine.
Infliximab (IFX) is a monoclonal anti-TNF-α indicated in some of these diseases, however, it is an expensive treatment, that has been found often no response occurs by some patients (between 20 -40%) due to production of antibodies against drug. Because of this, it has been proposed the utility of measuring blood levels of the drug, and the presence of antibodies against the same drug, to thereby try to predict the success or failure of treatment in the patient, in order to avoid spending inefficient resources and inconvenience to patients.
METHODS
The aim is to assess the transferability of results between the enzyme-linked immunosorbent assay (ELISA) of Sanquin® (Amsterdam, Netherlands) and Promonitor® (Barcelona, Spain) for concentrations of Infliximab in a group of patients treated with the drug.
To quantify the concentrations of IFX, two different sandwich ELISA methods were used, following the manufacturer's instructions. 84 patients' serums were collected and frozen at -80 for later determination. To establish the correlation between methods, Passing-Bablok (including CUSUM test) was performed, using the statistical program MedCalc 13.3.3.0
RESULTS
The regression equation was as follows: Promonitor = -0.0357597 + 0.946996 Sanquin with an IC95% for the intercept of -0.1558 to 0.05040 and an IC95% for the slope of 0.8452 to 1.0454. CUSUM test indicated no significant deviation from linearity (p = 0.68).
CONCLUSIONS
Because of the regression includes 1 and 0 in the confidence intervals for the slope and intercept, respectively, we must conclude that the results are interchangeable between different methods.

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Autoimmune diseases - Allergy

Cod: M160

ALLERGY TESTING IN PEDIATRIC POPULATION USING ALLERGEN SPECIFIC IGE TEST

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476 children age between 1-16,were included in this testing.“Polycheck multi-parameter“ assay platform is used for simultaneous determination of 20 different inhalation allergens in one single strip.This platform is based on a solid phase imunoassay as a method.The panel of tests which is used is "Mediterranean" with 20 inhalation allergens:d.pteronyssinus,d.farinae,Lepydogglyphus destructor,Tyrophagus prutescentiae,muggwort pollen,cat epithelia,dog epithelia,cow epithelia,pollen of: rye,velvet grass,quacck grass,maize,ragweed,sunflower,cottonwood,acacia longifolia and cypress;grass mix and chicken feathers.
Results: 32 % of patients did not have the specific IgE detectable for this group allergen-the test was negative. 40% of patients had a high titer of IgE. The most common allergen is d.petronyssinus 42%,d.farinae 38%. Mugwort pollen,and rye pollen-20%. 32% of children are sensitive to cow epithelia, class I and II, with clear clinical sympthoms only 9 %.Conclusions:Indoor allergens are the most common causes of all the allergies in pediatric population.

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Autoimmune diseases - Allergy

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AUTOIMMUNE HEPATITIS TYPE III IN 55 YEARS OLD MALE- A CASE REPORT

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Autoimmune hepatitis (AIH) represent chronic inflammatory condition of the liver, usually is characterized by liver transaminase elevation in the presence of autoantibodies. We have patient 55 years old male prior tested few times in his life for Anti-nuclear, anti-Mitochondrial antibodies, anti-LKM1 and anti-LC1. All tests were negative he came in our laboratory for routine tests and his transaminases levels were elevated. We perform multiplex serology liver test and we found positive antibodies SLA/LP Soluble Liver Antigen/ Liver Pancreas which represent marker for Autoimmune hepatitis type III. The case is unusual because AIH type III is occur in 20-40 years period and the patient have no sign of cirrhosis.

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Autoimmune diseases - Allergy

Cod: M162

CIRCULATING LEVELS OF CXCL10 ARE INCREASED IN PATIENTS WITH NON-SEGMENTAL VITILIGO, IN PRESENCE/ABSENCE OF AUTOIMMUNE THYROIDITIS

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Background
Vitiligo is a skin disease distinguished by pale patchy areas of depigmentation on face, wrists and hands, that at the beginning are small, and then tend to grow and change in shape. Two types of vitiligo exist: non-segmental vitiligo (NSV) that is usually symmetrical in the location of depigmentation, and segmental vitiligo (SV) that is not associated with autoimmune diseases. The importance of the Th1 immune response in the development of vitiligo, and of (C-X-C Motif) Receptor 3 (CXCR3) receptor and its chemokine CXCL10, has been shown, suggesting these could be novel targets of future therapeutical approaches. However until now, data about chemokines CXCL10 (Th1 prototype) and CCL2 (Th2 prototype) serum levels in NSV patients with/without thyroiditis (AT) have not yet been shown.
Methods
We measured circulating CXCL10 and CCL2 in 50 consecutive NSV patients, in 40 consecutive patients with NSV and AT (NSV+AT), in 50 sex- and age-matched controls without AT (control 1) and in 40 sex- and age-matched patients with AT without NSV (control 2). Serum CXCL10 and CCL2 levels were assayed by a quantitative sandwich immunoassay using a commercially available kit.
Results
Serum CXCL10 levels were significantly higher in control 2, than in control 1 ($P = 0.001$; ANOVA). NSV patients have serum CXCL10 levels significantly higher than control 1, or control 2 ($P = 0.001$). NSV+AT patients have serum CXCL10 levels higher than control 1, or 2 ($P < 0.001$), and than NSV ($P = 0.01$). Circulating CCL2 levels were not significantly different in control 1 and control 2, NSV patients with/without thyroiditis. No association was found between serum CXCL10 or serum CCL2 levels by simple regression.
Conclusions
This study first demonstrates high circulating CXCL10 levels in NSV patients, especially in the presence of AT and hypothyroidism, suggesting the importance of a common Th1 immune response in their immune-pathogenesis. Further studies are necessary in order to evaluate whether serum CXCL10 could be used as a clinical marker of NSV and/or AT.

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Autoimmune diseases - Allergy

Cod: M163

A MODERN ALGORITHM FOR THE DIAGNOSIS ALLERGOLOGIC

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Background: The majority of clinically relevant allergic reactions is correlated to the presence, in biological fluids of patients, specific IgE antibodies (S-IgE) proteins recognized by the immune system (antigens) defined for their role allergens. For the diagnosis of allergy the allergist it makes use of a good clinical history and three levels of allergologic investigations. Normally the patients are tested with the Skin Prick Test (SPT) in vivo test (first level) and only if the result would be contradictory with the patient's clinical history, or for confirmation of results obtained, then the patient is directed to the next step, namely the search in vitro S-IgE (second level).The third level of investigation for the diagnosis of allergy or for the evaluation of a prognosis or of any specific immunotherapy, consists of searching in vitro allergenic molecules due to the positive findings in the investigation of first and second level.
Materials and methods: In this study we have shown that is not necessary to investigate test S-IgE in vitro (Thermo Scientific, I-cap 1000 and ISAC CRD), when the SPT (ALK Abellò) provides results clearly positive and not borderline or inconsistent with the clinical history. From the SPT definitely positive test is investigated with the third-level tests for the detection of molecules. Only when the diameter of the wheal and the area were superior respectively, 3mm and 7mm2, the patients were subjected to the third level for the investigation on molecules allergenic. We have selected a series of 54 patients, males and females aged between 6 years and 48 years of age. All patients had allergic symptoms (mainly alimentary or respiratory.
Results: All patients investigated with the third level have responded with positivity single or mutiple the positive results to allergens SPT:excellent correlation between respiratory spt vs molecules (95%)
Suspected food allergens with the molecules have offered more significant responses relative to some border line results from the SPT (correlation: 92%).
Conclusions: we think that this new algorithm can be definitely adopted by the specialist that in the first instance can search through the S-IgE by SPT and when the test positive move to the third level to an overall assessment of prognosis diagnosis and therapy skipping the second level when there no question of interpretation. This results in a saving of cost, time and redundant analysis.

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Autoimmune diseases - Allergy

Cod: M164

AN EVALUATION OF CEREBROSPINAL FLUID OLIGOCLONAL BANDS IN MULTIPLE SCLEROSIS

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Background
Multiple Sclerosis (MS) is an inflammatory disease of the Central Nervous System with multifocal areas of demyelination. IgG index and an oligoclonal pattern is the most common abnormality detected in MS patients due to an increase of intrathecal immunoglobulin synthesis.
The purpose of this study was to determine how frequently OCB are detectable in the cerebrospinal fluid (CSF) from patients with MS and other neurological disorders and compare OCB with IgG index.
Methods
A cross-sectional study included 123 consecutive unselected patients with an OCB test requested by clinicians between January 2014 and December 2015. Patient´s records were reviewed and three diagnostic subgroups were established. The MS group consisted of 37 patients (Group I). The other groups included inflammatory central nervous diseases (n=35) (Group II) and the remaining patients were summarized as non-inflammatory disease group (Group III) (n=50). OCB were detected by isoelectric focusing followed by immunoblotting. Two or more OCBs were considered positive and IgG index was calculated by this formula: CSF/serum IgG:CSF/serum albumin. Statistical analysis was performed using STATA 13.
Results
The mean age of the patients was 44.37 years, although it was lower in MS group (37.92 years) and higher in non-inflammatory group (49.72 years). The prevalence of positive OCB was 40.16% in all patients, whereas it was 25.71% (9 patients) in inflammatory group, 14.00% (7 patients) in non-inflammatory group and 89.19% (33 patients) in MS group. The IgG index was elevated in 56.76% of MS patients. OCB sensitivity in MS group was 89.19% (95% CI: 75.29-95.72%) and specificity 81.18% (95% CI: 71.59-88.07%). Positive predictive value was 67.65% (95% CI: 53.38-78.79%) and negative predictive value was 94.52% (95% CI: 86.74-97.85%). The IgG index above 0.6 had a sensitivity of 56.76% (95%CI: 40.91-71.33), specificity of 94.19% (95% CI: 86.96-97.46), positive predictive value was 80.77% (95% CI: 62.12-91.49%) and negative predictive value of 83.33% (95% CI: 74.63-89.47%).
Conclusions
CSF OCB detection proved more useful than IgG index for laboratory diagnosis of MS because OCB has similar specificity and better sensitivity than IgG index. OCB test is able to detect non-ill patients with a great rate when the result is negative. However positive predictive value is not as good as negative predictive value due to the OCBs detection in other neurological diseases.

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Autoimmune diseases - Allergy

Cod: M165

VITAMIN D STATUS IN PATIENTS WITH POSITIVE RHEUMATOID FACTOR AND ANTI-CYCLIC CITRULLINATED PEPTIDE ANTIBODIES

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Background
There is growing interest in the contribution of vitamin D deficiency to autoimmunity. Several studies associate low levels of vitamin D and autoimmune disorders such as rheumatoid arthritis (RA), which cause cartilage destruction and bone erosion. Supplementation with vitamin D is used to reduce clinical scores and local histopathological alterations. Anti-cyclic citrullinated peptide antibodies (anti-CCP) are a serological marker of rheumatoid arthritis and also have a prognostic value for more aggressive disease.
This study aimed to investigate vitamin D status on anti-CCP and rheumatoid factor serum levels in RA patients.
Methods
Cross-sectional study. January, February and March were considered winter, April, May and June, were evaluated as spring, summer months were July, August and September and finally, autumn included October, November and December. Anti-CCP over 60 U/mL and rheumatoid factor (RF) above 15 IU/mL were considered positive. Trend analysis was performed with STATA13.
Results
A total of 1244 patients were studied from January 2013 to December 2015. Vitamin D mean was 26.54 ng/mL (95% CI: 25.85-27.23 ng/mL), Anti-CCP mean was 37.34 U/mL (95% CI: 32.45-42.23 U) and RF was 47.50 IU/mL (95%CI: 32.53-62.48 IU/mL). Vitamin D median was 22.11 ng/mL in winter, 23.54 ng/mL in spring, 28.54 ng/mL in summer and 25.96 ng/mL in autumn. In patients with vitamin D levels under seasonal median, the prevalence of positive anti-CCP and RF was 6.15% in winter, 7.27% in spring, 14.41% in summer and 10.27% in autumn. An increased risk of positive anti-CCP and RF prevalence was observed in summer respect winter: 2.34 (95%CI: 1.05-5.22), whereas in spring and autumn the differences were not significant (1.18 (95%CI: 0.50-2.81) and 1.67 (0.73-3.81) respectively).
Conclusions
Positive anti-CCP and RF prevalence risk is higher in summer-autumn than in winter-spring period in patients with vitamin D under the seasonal median. Seasonal changes have to be considered in RA patients, especially in those with a summer vitamin D value under the summer median because they are in risk of more aggressive disease.

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Autoimmune diseases - Allergy

Cod: M166

ANA IIF AUTOMATION: MOVING TOWARDS HARMONIZATION? RESULTS OF A RING TEST.

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Background
IIF assay on HEp-2 cells remains the gold standard for ANA testing. To overcome the lack of standardization of ANA IIF analysis, manufacturers have developed computer-aided diagnosis (CAD) systems. Our study aimed to investigate if the use of CAD systems contributes to the comparability of quantitative results in ANA IIF testing.

Materials and methods
3 serum samples were sent out to 10 clinical laboratories using the QUANTA-Lyser# in combination with the NOVA View® for ANA IIF analysis. 1 of the 3 samples had been sent in 2012, before the era of ANA IIF automation, by the WIV to all Belgian laboratories performing ANA testing.
The participants were asked to perform ANA IIF analysis of each sample 10x in 1 run, 1x in 10 different runs and 1x determination of endpoint titer by dilution. For each of the ANA IIF analyses, laboratories registered the LIU, SWT and the pattern, both as it was recognized by the NOVA View® and after supervisor review. Harmonization was evaluated in terms of variability in LIU and ANA IIF titer.

Results
Positive/negative discrimination by NOVA View® was 100% correct for all analyses. Pattern recognition by NOVA View® was pattern dependent and improved by supervisor review.
The evaluation of the intra- and inter-run LIU variability, revealed a larger variability for 2 laboratories, due to important pre-analytical and analytical problems. Laboratories using conjugate lot nr. 20337 showed a higher LIU variability than laboratories using the 3 other conjugate lot numbers.
Re-analysis of the 2012 EQA sample, resulted in a lower endpoint titer variability: in 2012 25% of the laboratories using INOVA HEp-2 substrate reported the median titer in comparison to 70% using NOVA View®.

Conclusion
Through the introduction of automated microscopic analysis, more harmonized ANA IIF reporting becomes feasible, provided that this totally automated process is controlled by a thorough quality assurance program, covering the total ANA IIF process, from the pre- to the post-analytical phase.

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Autoimmune diseases - Allergy

Cod: M167

THE IMPORTANCE OF DETECTING ANTI-DFS70 IN ROUTINE CLINICAL PRACTICE

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BACKGROUND: Screening for antinuclear antibodies by indirect immunofluorescence (ANA-IIF) is considered mandatory in the diagnostic work-up of systemic rheumatic diseases (SRD). However, up to 20% of apparently healthy individuals may test positive, making the interpretation challenging, especially in the context of low pretest probability. Recent reports suggest that the detection of autoantibodies targeting the dense fine speckled 70 (DFS70) antigen may facilitate this challenge. Here, we present the data of 4 Belgian laboratories (1 primary, 2 secondary and 1 tertiary care) investigating their clinical importance.
METHODS: Consecutive routine serum samples with a homogeneous-like pattern on ANA-IIF (dilution 1 in 160) were collected at AML Antwerp (n=327), GZA Antwerp (n=106), OLVZ Aalst (n=211) and UZ Gent (n=50). All samples were tested with at least 1 specific DFS70 assay (DFS70 IgG ELISA and lineblot [Euroimmun, full length antigen], DFS70 IgG CLIA [Inova Diagnostics, truncated antigen]) and HEp-2 select (Inova Diagnostics), in case of discordant results. Anti-DFS70 positive samples were further characterized by documenting co-occurrence with SARD-specific ANA, demographics and clinical information.
RESULTS: In this multicenter study, up to 26% DFS70 positivity within the homogeneous-like population was found. We observed a trend towards higher anti-DFS70 frequencies in primary care (21%) compared to secondary (5,7%, p=0,001) and tertiary (1,9%, p=0,005) care, especially if only concordant samples and samples without co-occurrence of SRD-specific ANA were taken into account. Moreover, in this subpopulation of anti-DFS70 positive samples SRD was also less frequent, however, frequencies up to 50% in tertiary care were observed.
CONCLUSIONS: Anti-DFS70 are most prevalent in primary care setting. Our data do not support that anti-DFS70 is usable to exclude SRD. Nevertheless, anti-DFS70 may explain positive ANA-IIF results, contributing in the clarification of diagnostic challenges, especially if pretest probability for SRD is low. To avoid diagnostic confusion, we think that anti-DFS70 should not be reported in absence of a homogeneous-like pattern or presence of SRD-specific ANA.

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Autoimmune diseases - Allergy

Cod: M168

THE ROLE OF THE CRH-AXIS IN STRESS-INDUCED PSORIASIS

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BACKGROUND: Psoriasis is a chronic skin inflammatory disease strongly related to stress. Hypothalamic pituitary-adrenal (HPA) axis and its main regulator, corticotrophin-releasing hormone (CRH), has the key role in the coordination and control of complex responses to stress, both systemically and locally. CRH appears to exert its effects through two known so far receptors, the CRF_1 and CRF_2. Both mRNA and protein of CRH family peptides and receptors are expressed in numerous peripheral tissues, including skin. Recently, it has been suggested that peripheral CRH exerts potent proinflammatory effects, in contrast to the anti-inflammatory role through the release of glucocorticoids from the adrenal gland during the activation of HPA axis. Based on the above, the aim of our study was to investigate the role of CRH deficiency and glucocorticoid insufficiency in the induction and exacerbation of psoriasis in vivo.

METHODS: For this purpose we used the imiquimod (IMQ)-induced psoriasis protocol in Crh-deficient ($Crh^{-/-}$) and wild type (WT, $Crh^{+/+)}$ mice and we compared them before and after glucocorticoid replacement.

RESULTS: $Crh^{-/-}$ mice exhibited psoriatic lesions following IMQ administration earlier than the corresponding $Crh^{+/+}$ mice and increased keratinocyte proliferation mainly in hair follicles and skin basement membrane. $Crh^{-/-}$ mice also had higher circulating levels of IL-6 and splenomegaly. Protein levels of IL-17A in the skin were elevated in $Crh^{-/-}$ compared to $Crh^{+/+}$ mice. Corticosterone replacement in the serum of $Crh^{-/-}$ mice reversed splenomegaly, but did not affect, at least macroscopically, psoriasis or IL-6 serum protein levels. Also, protein levels of IL-17A were statistically elevated in the spleen of corticosterone-restored $Crh^{-/-}$ mice.

CONCLUNSIONS: These results suggest that CRH may act independently of glucocorticoids in the development of psoriasis.

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Autoimmune diseases - Allergy

Cod: M169

MOLECULAR DIAGNOSIS IN ALLERGOLOGY: APPLICATION OF THE MICROARRAY TECHNIQUE.

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BACKGROUND
Recombinant and purified allergens are currently available for determining specific IgE targeted to different allergenic components. In this way it is possible to diagnose the sensitization profile of each individual patient. The microarray technique makes it possible to determine specific IgE against multiple allergens simultaneously in one same patient, with a minimum amount of serum. In addition, microarray technology helps explain cross-reactions, and facilitates the evaluation of subjects in which skin tests cannot be performed. The aim is to study usefulness of microarrays in the recognition of individual patterns of IgE reactivity to protein families with homologs across plant or animal species (tropomyosins, lipid transfer proteins, profilins, and the pathogenesis-related protein Bet v 1 family).

METHODS
Samples of 76 patients were analyzed by a microarrays technique. The measurement of the allergenic load was realized by ImmunoCAP ISAC (Immune-Solid Phase Allergen Chip, Austria). This assay uses a combination of purified natural and recombinantly expressed allergens (including 103 individual allergens from 47 species). Patients with the following diagnoses were selected: idiopathic anaphylaxis (n = 7), immunotherapy prescription (n = 11), Severe atopic dermatitis (n = 22), mixed syndromes food allergy and respiratory (n = 24) and others (n = 12).

RESULTS
Of the patients analyzed, 34 showed sensitization to cross-reactive proteins. 19 patients had allergy to lipid transfer proteins (LTP), thermostable proteins and can cause severe reactions. 17 patients had allergy to homologous birch proteins allergen (Bet v 1) and 8 patients had allergy to profilin. Both proteins are heat labile and are usually associated with moderate reactions. 7 showed reactivity to Tropomyosins (myofibrillar protein of mites and crustaceans), 4 serum albumin (milk, egg, meat, ...) and 2 polcalcin. The utility of this diagnostic test was useful in 84% of cases to allergists.

CONCLUSIONS
Analysis multiple allergen components is useful in discriminating between individual components allergy and cross reactivity and provides useful information regarding the design of immunotherapy.

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Autoimmune diseases - Allergy

Cod: M170

PREVALENCE AND PATTERNS OF ANCA IN PATIENTS OF A RESPIRATORY DISEASES CENTRE.

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Background
Anti- neutrophil cytoplasmic antibodies (ANCA) are important tools in the diagnosis of systemic vasculitis. They usually are more demanded in multidisciplinary medical centers with departments of internal medicine, kidney diseases, gastro-intestinal diseases and rheumatology. In this study we aimed to determine their prevalence and specificity in samples sent to the laboratory of immunology in a centre of respiratory diseases.
Methods
Between January 2013 and October 2016, we analyzed the blood samples of 570 Tunisian patients [sex ratio: 0.76 mean age 48.3 years (3-85 yrs)] for ANCA detection by indirect immunofluorescence (IIF) on ethanol fixed neutrophils. Positive samples were further tested for 7 antigenic specificities (PR3, MPO, LF, BPI, elastase, lysozyme and cathepsine G) by Enzyme linked immunosorbent assay (ELISA).
Results
Nineteen (19) patients were ANCA positive (3.3%). Mean age of these patients was 53.2 years (19-84 yrs) comparatively to 47.9 years of negative patients. Requests for ANCA detection were justified by different clinical situations e.g: persistent severe asthma, interstitial lung disease, bronchiectasis or diffuse alveolar haemorrhage. ANCA positivity was equally distributed between males and females (sex ratio :0.9). ANCA patterns were equally perinuclear (P-ANCA) and cytoplasmic (c-ANCA). MPO (31 .5 %) and PR3 (26 %) were the main antigenic targets and were essentially found among patients suffering a granulomatosis with polyangiitis. BPI, another antigenic specificity was found in 21 % of the cases and was associated with chronic lung infections with bronchiectasis.
Conclusion
In this study conducted within a respiratory centre, we showed a prevalence of 3.3% of ANCA positivity which is in line with the fact that ANCA associated systemic vasculitis is a rare condition. We found that ANCA targeting MPO and PR3 are associated with small vessel vasculitides whilst ANCA directed against BPI are detected in patients with chronic pulmonary infections .

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Autoimmune diseases - Allergy

Cod: M171

SERUM SPECIFIC IGE TO INHALANT ALLERGENS IN PATIENTS CONSULTING IN A RESPIRATORY DISEASES CENTER

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Background
Allergic diseases are increasing worlwide . Along with the skin prick tests(SPTs), serum specific IgE determinations are an important diagnostic tool for allergic sensitization. We aimed to establish the specific IgE profile in sera of patients consulting for allergic conditions in a respiratory diseases center in Tunisia.
Methods
Between January 2012 and december 2015, blood samples of 443 Tunisian patients (mean age : 23.48 years sex ratio :0.85) were sent to our laboratory for Specific IgE determination by an immunoblot assay to a panel of inhalant allergens (Mediwiss allergy screen or Euroline). Total IgE concentrations were measured using the Immulite 1000 system (Siemens).
Results :
The most recurring data that justified IgE determination were: rhinitis , asthma, chronic urticaria and dermographism or negative cutaneous prick tests. Positive specific IgE were found in 51.4 % of the cases. The most frequent allergens were D.Pteronyssinus and D.Farinae which were found respectively in 46 % and 38 % of the positive sera. Total IgE levels in sensitized patients was higher (514.3IU/ml) than in negative patients(206.2 IU/ml) .
Conclusion
Even if the gold standard test for assessment of allergy remain SPTs , serum specific IgE determination can contribute to diagnosis especially when SPTs cannot be done. Our study about the serum profile of Tunisian patients consulting in a medical institute of respiratory diseases found results which are according to the literature, dust mite is the most frequent sensitizing inhalant allergen

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Autoimmune diseases - Allergy

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ISCHEMIA MODIFIED ALBUMIN LEVELS IN ULCERATIVE COLITIS PATIENTS

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An increased level of ischemia modified albumin (IMA) is not specific for cardiac ischemia and has been shown to be elevated in many other conditions causing oxidative stress. Ulcerative colitis (UC) is a chronic condition characterized by recurrent episodes of colon inflammation, which is the underlying cause of many of the symptoms and findings of UC. Therefore, the diagnosis and follow-up of the inflammation are critically important for the clinical management of the disease. In this study, the association between disease activity in UC, in which oxidative stress is thought to play a role in the pathogenesis, and IMA, a marker of oxidative stress, has been evaluated.

This study was conducted at the Department of Gastroenterology, İzmir Katip Çelebi University, Atatürk Research and Training Hospital between September 2013 and April 2014. A total of 30 patients with ulcerative colitis (active disease) and 27 patients remission disease were included in the study. Albumin, IMA, C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR) were measurement and the correlation between IMA and other parameters was examined in UC patients.

In active UC patients serum IMA levels 0.51±0.13 ABSU, CRP levels 1.95 mg/dl (0.10 - 21.9), ESR 35 mm/h (3 - 103) , patients in remission serum IMA levels 0.30±0.14 ABSU, CRP levels 0.30 mg/dl (0.10 - 3.9), ESR 10 mm/h (2 - 55). Significantly higher levels of IMA were found in patients with active UC as compared to those in remission ($p < 0.001$). Also, IMA correlated with C-reactive protein ($r=0.522$ $p < 0.001$)and erythrocyte sedimentation rate($r=0.395$ $p < 0.001$).

Our results suggest that IMA, a marker of oxidative stress, may be a useful parameter for assessing the disease activity in patients with ulcerative colitis.

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Autoimmune diseases - Allergy

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CYTOKINES IN PATIENTS WITH NEUROLUPUS AND OTHER CLINICAL MANIFESTATIONS OF SLE

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Background. This paper studies the balance between proinflammatory and antiinflammatory cytokines in serum and lymphocyte cultures of patients with SLE.
Methods. Complete biochemical and immunologic laboratory processing of the biomaterial, enabled classification of SLE patients (n=55), into the following groups: patients with predominant cutaneous disease manifestation, S-SLE,n=17; patients with neurolupus, N-SLE, patients with predominant joint changes,J-SLE; patients with blood vessel changes–vasculitis,V-SLE. Twenty healthy volunteers, comprised the control group. Concentration of proinflammatory cytokines (TNF-α,IFN-γ,IL-1β), antiinflammatory cytokines (IL-4,IL-10,IL-13) was determined by commercial ELISA tests
Results. In this study, we have recorded statistically significant increase of this cytokine related to controls. The increase was at its highest in patients with neurolupus (P<0,001) and joint disease (P<0,01), while cutaneous and vascular forms were of lesser significance (P<0,05).Comparing the groups, we noticed significant TNF-α increase in joint and neurolupus related to vascular SLE (P<0,05). IL-4, secreted by Th2 type lymphocytes, mast cells and basophilic leukocytes, demonstrated statistically significant increase in neurolupus patients 11,96±2,91pg/ml and vascular lupus 10,93±1,77pg/ml compared to control values 8,97±1,90pg/ml for P<0,05. IL-4 induces inflammatory reaction rich in monocytes and eosinophilic leukocytes. The increase of the IL-10 concentration is of statistical significance in neurolupus patients (16,25±4,31pg/ml) and in vascular disease (15,23±2,18pg/ml) compared to controls 5,13±1,51, for P<0,01 and skin disease (12,87±2,28 pg/ml), with somewhat lower significance of P<0,05.
Conclusions. The results of this paper indicate that TNF-α can be of special importance in the N-SLE pathology. TNF-α released from inflammatory cells act synergistically in the circulation, inducing peripheral vasodilatation, increase of vascular permeability and alteration of endothelial function favoring thrombosis. Increased IL-10 can be attributed to its increased production in monocytes, part of B cells and CD4+CD45RO+memory Tcells and associated with neuropsychiatric menifestations of the disease. Inhibitors of cytokine production are being extensively studied as potential therapeutics in various immunologic and inflammatory diseases.