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## AB1224 CT PET SCANS IN SUSPECTED LARGE VESSEL VASCULITIS AND GIANT CELL ARTERITIS – AN AUDIT IN THE BELFAST HEALTH AND SOCIAL CARE TRUST (BHSCT)

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**Background:** British Society of Rheumatology (BSR) guidelines, due to be updated in April 2018, recommend consideration of CT PET when there is suspicion of large-vessel GCA (LV-GCA) in patients with prominent systemic symptoms, limb claudication or persistently high-inflammatory markers despite adequate glucocorticosteroid therapy. Vascular Ultrasound is unhelpful in assessment of the aorta.
**Objectives:** We investigated the use of CT PET in suspected cases of LV-GCA and its impact on management of patients in the BHSCT from August 2016 to August 2017.
**Methods:** The IT support team in Royal Victoria Hospital provided a list of CTPET scans requested under the specific code for vasculitis and/or Pyrexia/infection and another code for general. Of the 250 scans identified under these codes, 34 scans were requested by Rheumatology for possible vasculitis following a review of the electronic care records. A proforma was used to aid data collection.
**Results:** Female:Male ratio was 3.25:1, with a mean age of 65. 88% of the scans were requested due to a suspected diagnosis of vasculitis and 12% were for follow up of known vasculitis. 24% of CT PET scans were positive for large vessel vasculitis (LVV). The ESR was greater than 50 mm/hr in 75% of positive scans. Of those patients with a positive CT PET scan, 88% were treated with steroids. Of those patients with a negative CT PET scan, 42% were treated with steroids. It is noteworthy that 29% of patients were on steroids at the time of CT PET which may impact results. 60% of patients who were on steroids at the time of CT PET were on 60 mg of prednisolone daily. 31% of patients with negative scans were on steroids at the time of CT PET. 46% of patients with negative CT PET scans remained on steroid treatment. Steroid treatment was continued in patients with negative scans on basis of active aortic valve histology ±clinical criteria for diagnosis of GCA ±cerebral vasculitis on neuroimaging ±polymyalgia rheumatica evident on CTPET. CT PET changed management in 65% of patients with positive results supporting steroid treatment and negative results guiding withdrawal of steroids.
**Conclusions:** We are fortunate to have access to CT PET in Northern Ireland. CT PET scans changed management in 65% of our patients, despite 29% of patients being on steroid treatment prior to CT PET. We wish to increase awareness of the role CTPET in the diagnosis and management of LVV. We are liaising with radiology colleagues to refine and maximise appropriate referrals for CT PET scans for patients with suspected vasculitis.

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## AB1225 ANTIBODIES AGAINST HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEINS (RA33) MAY HAVE A DIAGNOSTIC AND PROGNOSTIC VALUE IN RHEUMATOID ARTHRITIS, PARTICULARLY WHEN OTHER SEROLOGICAL TESTS ARE NEGATIVE

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**Background:** The high frequency of detection of antinuclear antibodies in rheumatoid arthritis (RA), although predominantly in low titres, allows us to consider the possibility of using varieties of these antibodies (primarily antibodies to RA-33) markers of RA especially in the early stages of the disease.
**Objectives:** To study the frequency of occurrence and determine the prognostic significance of antibodies to RA-33 in RA patients.
**Methods:** 57 RA patients were examined (mean age 50.5±10.1 years).
The patients with the developed stage of the disease (47.4%) prevailed, the average activity (DAS28=3.2–5.1) of the pathological process (86%); with the second radiographic stage (42%) and functional class 2 (77%).
The antinuclear factor was determined in the indirect immunofluorescence reaction on the HEp-2 cell line (norm <1:80), IgM-rheumatoid factor by the latex agglutination method (up to 20 IU/ml), antibodies (norm up to 20 U/ml) and antibodies of IgG class to RA33 antigen (norm up to 25 U/ml) by ELISA test.
**Results:** ANF was detected in 18 patients with RA (32%), and in 94.4% of cases (17 patients) a diagnostic titer of 1:80 and a diffuse type of glow of the nucleus were noted. The ANF titres did not correlate either with the activity of the disease or with extra-articular manifestations of RA (p>0.1). Anti-RA33 was detected in 20 (35%) RA patients: 18 positive people (90%) had low positive anti-RA33 values (25 to 75 U/ml). In 35 (61.4%) of RA patients, anti-CCP was detected: 19 (33.3%) had low positive values (20 to 60 U/ml), 16 (28%) had highly positive values (more 60 U/ml). IgM-RF was detected in 26 (45.6%) patients in the values>48 IU/ml, as well as in 17 (30%) patients with RA in the values from 24 to 48 IU/ml. 14 people (54%) of patients with high IgM-RF levels had systemic manifestations of RA. It should be noted that anti-RA33 was detected in 9 patients with seropositive for anti-CCP and in 11 patients with seronegative both for anti-CCP and IgM-RF. Thus, when the results of standard serological tests are negative, an additional study of anti-RA33 is recommended to diagnose seronegative RA.
When assessing the prognostic significance of the available clinical and laboratory and instrumental data we have analysed the results of the study of anti-CCP, anti-RA33, as well as all data on the presence of X-ray erosions in patients with RA with magnetic resonance imaging or ultrasound examination of affected joints. The presence of erosion was noted in 23 (40.4%) RA patients. The frequency of detection of anti-CCP in RA patients was significantly higher in the presence of erosive lesions of joints (19 of 35 patients were positive by anti-CCP, compared with 4 of 22 patients, negative for anti-CCP, $\chi 2=5.89$, p=0.015). In the RA group of patients positive for a wide range of antibodies (IgM-RF, anti-CCP, anti-RA33), the signs of joint erosion were identified in 22 of 46 patients, and in isolated increase only anti-RA33 – in 1 patient out of 11 people in this group $\chi 2=4.04$, p=0.044).
**Conclusions:** In the presence of highly positive anti-CCP values, RA patients have a more unfavourable prognosis, while an isolated increase in anti-RA33 is associated with a "milder progression" of the disease and inversely proportional to erosive processes in the joints.

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## AB1226 THE DIAGNOSTIC VALUE OF SERUM KL-6 IN CONNECTIVE TISSUE DISEASE ASSOCIATED INTERSTITIAL LUNG DISEASE

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**Background:** The connective tissue diseases is a group of inflammatory, immune-mediated diseases.CTD often leads to autoimmunity and subsequent tissue injury. It is an important contribute to thoracic changes, particularly interstitial lung disease, is are the main causes of mortality and morbidity among patients with connective tissue diseases. Prognosis and response to therapy are the most pressing challenges for connective tissue disease-associated ILD (CTD-ILD).
At present, the basic methods for the diagnosis of various types of ILD includes high-resolution computed tomography, bronchoscopy, and surgical lung biopsy. In addition, continuous lung function tests are commonly used to monitor disease activity and predict the outcome of patients with ILDs, But these tests require specific inspection machines and Repeatability is not good. At present, many biomarkers have been developed to detect ILDs, and the most important biomarkers is KL-6 and lung surface active protein A (SP- A) and surfactant protein D (SP – D) witch secreted by alveolar epithelial type II cells. But Relevant studies have shown that the sensitivity, specificity and accuracy of KL-6 are higher than SP-A and SP-D.
**Objectives:** To evaluate the diagnosis of the serum Krebs von den Lungen-6 (KL-6) for the interstitial lung disease(ILD) associated with connective tissue diseases(CTD).
**Methods:** We retrospectively analysed the medical records of 50 patients with CTD associated ILD,46 CTD patients without ILD. Measurement of serum KL-6 levels and pulmonary function tests performed in parallel were reviewed.T test, $X^2$ test, non-parametric test, SPSS and correlation analysis were used for data analysis.
**Results:** The significantly higher levels of KL-6 were determined in the CTD-ILD group than in either the CTD without pulmonary involvement group(P<0.05) . Serum KL-6 correlated negatively with forced vital capacity(FVC%) (%predicted), forced expiratory volume in one second (FEV1)(%predicted) and diffusing capacity of the lung for carbon monoxide (DLCO) (% predicted). By the ROC curves of serum KL-6 levels in 96 patients. The optimal cutoff value of serum KL-6