with CHIKV IgM positive. In the EQ-5D (Figure 1), between 72% and 92% of patients didn't report problems on the mobility, self-care, usual activities, anxiety and depression dimensions. In contrast pain and discomfort dimensions were affected from moderate to extreme (44.7% and 8.6%). There weren't significant differences between true positives, true false, false negative within all the variables, except on the anxiety and depression dimensions where the false positives had a higher significant score in comparison to the other groups (n: 10, 38.5%; p=0.00; OR:4.17, IC:1.8-9.57). In the EQ-5D-VAS, media for VAS was 75.56 (SD±21.18) where the highest scores of VAS were found on the false negatives. In pain VAS, false positives as well as the duration greater than 7 weeks where associated with several pain (n: 10, 2.9%; OR: 0.2; IC 1.25–6.33 y n: 27, 21.3%; p=0.018; OR 2.02, IC: 1.12–3.66 respectively).

Conclusion: In general, the disability of CHIKV infected patients was mild to moderate, finding the most affected dimensions to be pain, discomfort, anxiety and depression. The false positives and the population with anxiety and depression are related with higher score of disability.

Figure 1. EuroQol-5D in patients with CHIKV infection from the Colombian COPCORD cohort.

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SAT0459

DIAGNOSIS AND MANAGEMENT OF ACUTE HOT JOINTS AT A TERTIARY RHEUMATOLOGY CENTRE OVER A 7-MONTH PERIOD

Mrinalini Dey¹, Pankaj Lal², Robert N. Thompson¹, Nicola Goodson¹. ¹Aintree University Hospital, Rheumatology, Liverpool, United Kingdom; ²Aintree University Hospital, Microbiology, Liverpool, United Kingdom

Background: The acute hot joint presentation is common in clinical practice, often due to crystal arthritis or non-inflammatory conditions. The most serious diagnosis is septic arthritis (SA), which can destroy cartilage within days, and therefore must be promptly diagnosed or excluded. The mortality rate for SA is 7-15%, despite antibiotic use [1]. Crystal arthropathies and SA are difficult to distinguish clinically, requiring arthrocentesis and synovial fluid (SF) analysis, in keeping with national guidelines.

Objectives: 1. Quantify number of acute hot joint presentations to our hospital over 7 months, including incidence of SA and crystal arthropathy. 2. Determine clinical features and outcomes (including morbidity/mortality) in SA.

3. Compare clinician diagnosis with laboratory diagnosis (gold-standard diagnostic test; crystal microscopy and culture).

4. Determine the correlation between WCC and crystal arthropathy or SA. **Methods:** We retrospectively analysed laboratory diagnostic data and electronic clinical records, for patients presenting to a tertiary rheumatology centre in Northwest England with an acute hot joint, February-August 2018. For crystal arthropathy and SA, sensitivity, specificity, likelihood ratios, and accuracy of diagnosis were calculated for clinician diagnosis when compared to laboratory diagnosis, using the statistical software 'R'. WCCs were used to create receiver operating curves (ROCs), with area under the curve and predicted diagnostic threshold for SA and crystal arthropathy. In cases of SA, organism, serum inflammatory markers, and outcomes were recorded.

Results: 137 patients were included. The most common site of arthrocentesis was the knee (n=108). There were 53 clinician-confirmed cases of crystal arthropathy. Compared to laboratory crystal microscopy, this yielded a sensitivity of 91.7%, specificity 80.2%, diagnostic accuracy 83.2%. There were 10 cases of native joint SA (plus 2 prosthetic and 1

case of osteomyelitis). SF cultures were positive in 80% of cases, all of which grew *Staphylococcus aureus*. 50% had commenced antimicrobials prior to arthrocentesis. 8 cases were treated successfully (5 prolonged admission due to underlying rheumatological disease); the 2 culture-negative cases had significant morbidity, with persistent symptoms. For SA, mean serum C-reactive protein at presentation was 152; serum WCC was 12. Clinician diagnosis, compared to culture results, yielded a sensitivity of 100%, specificity 98.4%, diagnostic accuracy 98.5%. Figure 1 shows mean SF WCC by diagnosis; highest value was SA (WCC=136293). ROC analysis of WCC yielded potential diagnostic threshold of 36450 for SA (AUC=0.7) and 10000 for crystal arthropathy (AUC=0.7) in our cohort.

Conclusion: The acute hot joint continues to be a common presentation in the acute medical setting. SA has considerable morbidity associated with it, especially in the presence of co-existing rheumatological disease. Our results confirm the importance of prompt arthrocentesis, prior to commencement of antimicrobials. SF WCC may also be utilised as a rapid diagnostic marker, especially differentiating between inflammatory and non-inflammatory causes of a hot joint, when taken with clinical assessment.

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Figure 1

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SAT0460

HCV-RELATED MIXED CRYOGLOBULINAEMIA IN THE DIRECT-ANTIVIRAL AGENTS ERA: IS THERE ADVANTAGE IN SEQUENTIAL THERAPY WITH RITUXIMAB?

Maria Di Cicco¹, Davide Antonio Filippini¹, Federica Filippini², Laura Belloli¹, Valeria Campanella¹, Cinzia Casu¹, Michel Chevallard¹, Marina Muscarà¹, Mariaeva Romano¹, Emanuela Schito¹, Elisa Verduci¹, Massimo Puoti³, Maria Vinci⁴, Oscar Massimiliano Epis¹. ¹Grande Ospedale Metropolitano Niguarda, Rheumatology, Milano, Italy; ²Università Politecnica, Mathematics, Milano, Italy; ³Grande Ospedale Metropolitano Niguarda, Infectious Diseases, Milano, Italy; ⁴Grande Ospedale Metropolitano Niguarda, Hepatology, Milano, Italy

Background: Mixed Cryoglobulinaemia(MC) is a small vessel vasculitis characterized by the presence of a monoclonal rheumatoid factor(RF) and polyclonal immunoglobulins that precipitate at cold temperature, with a large spectrum of clinical manifestations. MC is strongly associated with hepatitis C(HCV) infection>90%. The new direct-acting antivirals(DAA) against HCV, which can eradicate the virus in >95% of patients, are supposed to have benefits on clinical manifestations of MC, nonetheless the amount of data is still limited. Patients with severe vasculitis may require anti-CD20 agent Rituximab(RTX) over DAA. However, despite the strong rationale, the advantage of dual therapy is still debated and the optimal therapeutic schedule unknown.

Objectives: To investigate the impact of DAA treatment on clinical manifestations and biochemical parameters of disease activity in HCV-related MC patients who reached complete viral eradication, and if pre-treatment with RTX was able to define a subset of patients with a different outcome.

Methods: Data was collected from 31 patients with MC, mean age 68 yrs, female 80%, mean disease duration 10 yrs who were treated with

DAA and reached complete viral eradication, at 3 time points: before starting DAA (pre-DAA), after completing DAA (post-DAA), 52 weeks after completing DAA (52w). Additionally, a population of 9 patients with the same disease (mean age 65 yrs, female 77%, mean disease duration 9 yrs) but treated with one or more cycles of RTX prior receiving DAA, was analysed at the same timepoints and additionally before starting RTX(pre-RTX). At each time point clinical data (presence/absence of purpura, neuropathic manifestations, arthralgia, fatigue, nephritis) and biochemical parameters (% cryoglobulins, C3, C4 and RF) were recorded. The change in clinical and biochemical parameters at different timepoints were evaluated.

Results: Among patients treated with DAA only, the prevalence of clinical manifestations before starting treatment was the following: purpura 31%, neuropathic manifestations 52%, arthralgia 28%, fatigue 14%, nephritis 3%. We observed a significant reduction in purpura after treatment (pre-DAA vs post-DAA=31% vs 13%, $p=0.044$) that persisted at 52w (pre-DAA vs 52w=31% vs 0%, $p=0.004$). This in parallel with a significant reduction in the level of cryoglobulins (pre-DAA vs 52w=3.99±5.28 vs 1.6 ±1.7, $p=0.029$ and pre-DAA vs 52w=3.99 ± 5.28 vs 0.92 ± 1.75, $p=0.008$). Among patients pre-treated with RTX, the prevalence of clinical manifestations before starting RTX was: purpura 78%, neuropathic manifestations 100%, arthralgia 44%, fatigue 50%, nephritis 22%; and before starting DAA was: purpura 22%, neuropathic manifestations 100%, arthralgia 0%, fatigue 0%, nephritis 0%. A significant reduction in the rate of purpura (pre-RTX vs pre-DAA=78% vs 22%, $p=0.009$) and arthralgia (44% vs 0%, $p=0.012$) after RTX treatment was observed, but no difference in any clinical parameter when comparing pre-RTX with post-DAA and 52w. No significant change in any of the serological parameter was observed.

Conclusion: DAA treatment is associated with rapid and sustained decrease in the level of cryoglobulins and related clinical improvement, specifically purpura. Patients who had been pre-treated with RTX showed clinical improvement in terms of purpura and arthralgia, albeit transient; subsequent treatment with DAA did not result in any immediate or long term additional clinical benefit.

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SAT0461 VERTEBRAL OSTEOMYELITIS IN THE IMMUNOSUPPRESSED PATIENTS

Jorge Juan Frago-Gil¹, Roxana Gonzalez Mazario¹, Jose Ivorra Cortés¹, Francisco Miguel Ortiz Sanjuan¹, Elena Grau Garcia¹, Cristobal Pavez Perales¹, Marta De la Rubia Navarro¹, Inmaculada Chalmeta Verdejo¹, Luis Gonzalez Puig¹, Isabel Martínez Cordellat¹, Rosa Negueroles Albuixech¹, Cristina Alcañiz Escandell¹, Jose Eloy Oller Rodríguez¹, Elvira Vicens Bernabeu¹, Carmen Nájera Herranz¹, Inés Cánovas Olmos¹, María Tasisas Pitarch², Eva Calabuig Muñoz², Miguel Salavert Lletí², Jose Andrés Román Ivorra¹. ¹Rheumatology Department. HUP La Fe, Valencia, Spain; ²Infectious Diseases Unit. HUP La Fe, Valencia, Spain

Background: Vertebral Osteomyelitis (VO) is an infectious disease that could involve intervertebral space (discitis). Its incidence is raising for several reasons, such as the increasing number of patients on immunosuppressive therapy. The treatment includes long term antibiotic, that should be initiated after biopsy (if possible) and sometimes, further surgery is needed¹.

Objectives: To analyze the influence on prognosis of detection of OV in immunosuppressed (IS) patients.

Methods: Single center retrospective observational study including IS adult patients diagnosed of VO based on the combination of clinical presentation with either a definitive bacteriologic diagnosis or pathological and/or imaging studies from January 2010 to January 2019. Demographic features, concurrent diseases, clinical history (length of pain and fever prior to admission), laboratory findings, microbiological diagnosis and radiological data were compiled. We considered as IS patients those who had rheumatic or inflammatory bowel disease undertaking immunomodulatory drugs, solid organ transplantation receptors, patients with an active

malignancy or Human Immunodeficiency Virus (HIV) infected. Clinical and radiological history of lumbar stenosis or disc herniation was considered as prior spine pathology. Surgical infections were excluded. We considered deaths attributable to PVO those which were directly caused by the infectious picture and/or its complications during the next year after diagnosis.

Results: Eighteen of 122 patients with VO (21.96%) were IS. Basal demographic and clinical features are exposed in table 1. Detailed data about the cause of the IS is provided separately in table 2. Duration of pain prior to diagnosis had a median of 30 days (15.5, 55). C reactive protein showed a median value of 65.2mg/L (19.32, 153.9) and Erythrocyte Sedimentation Rate mean value was 80.57mm/H (31.75). MRI was the imaging technique most often used for diagnosis (83.33%), followed by CT-scan (16.67%). The region most frequently affected was lumbosacral spine (44.44), then dorsal (33.33%) and finally cervical (22.22%). Some abscess (epidural or paravertebral) was detected in 16 patients (88.89%) close to non-IS patients (90.38%). Worst data concerning vertebral destruction was observed (66.67% in IS group against 49.04 in non-IS, $p=0.3$) and cord compression (61.11% versus 26.92% respectively, $p=0.05$). Fifteen patients underwent CT guided biopsy (83.33%) with prior antibiotic exposure in 11 of them. Median exposure was 4.5 days (3, 8.75). Delay from admission to procedure had a median value of 6 days (3.5, 9). Culture was positive in 53.33% of cases. In 10 patients, the picture was attributed to Gram+ (55.56%), in other 2 cases Gram- (11.11) and 1 case of tuberculosis (5.56). In 5 cases (27.78%) final pathogen was unknown. Four patients (22.22%) required further surgery and 2 patients (11.11) died, similar than non-IS group, 11.54%.

Conclusion: In general terms, data about imaging is worse in IS patients and higher proportion of cervical spine involvement was also noted. Although, early intervention (diagnosis, puncture guided biopsy and treatment) seems to be protective against a bad outcome, since IS patients showed similar prognosis (further surgical procedures and death) than non IS patients. To sum up, new onset back pain in a IS patient, should be thoroughly studied so as to consider a VO as soon as possible.

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SAT0462 INTEREST OF FOLLOW-UP IMAGING EXAMINATIONS IN PATIENTS WITH PYOGENIC VERTEBRAL OSTEOMYELITIS: A RETROSPECTIVE STUDY

Sophie Hecquet, Kevin Bouiller, Frank Verhoeven, Clément Prati, Daniel Wendling, Catherine Chirouze. Centre hospitalier régional universitaire de Besançon, Besançon, France

Background: Systematic follow-up imaging in patients with pyogenic vertebral osteomyelitis (PVO) is widespread. However, it is discussed, and there is no recommendation.

Objectives: Evaluate the interest of follow-up imaging examinations in patients with pyogenic vertebral osteomyelitis

Methods: We conducted a retrospective cohort analysis of patients with PVO who had both baseline and follow-up imaging results available in a French university hospital during the period of 2010-2018. We have classified the follow-up images into two groups, improvement/stability and deterioration, compared with the baseline findings. For each patient, we compared their imaging follow-up to their clinical-biological condition assessed at the same time.

Results: We have collected 80 patients. The median age was 71 years [32-89], 46 men, 13 patients had a history of spinal surgery. The most frequently reported germ was methicillin-sensitive staphylococci and the level of spinal involvement was predominantly lumbar. A Computerized Tomography (CT) was performed in 64% and a Magnetic Resonance Imaging (MRI) in 85% at the time of diagnosis. We identified 89 follow-up images, 58 MRIs, 31 CTs. The median delay of realisation was 85 days [11-364]. Soft tissue infiltration was observed in 50 patients compared to 26 on follow-up images but 3 were new. Similarly, 24% of the initial images had epiduritis compared to 16% during follow-up, 3% had appeared secondarily. There were 12% initial erosions described compared to 25% at follow-up. Of the 33 patients with clinical and biological recovery, 67% of follow-up images were classified as improving/stable and 33% as worsening (new abscesses (n=3), extension of soft tissue infiltration (n=2) and/or epiduritis (n=2) or appearance of new locations (n=2)). Among the 37 patients considered as unhealed, 87% of follow-up images were classified as improving/stable and 13% as worsening (new abscesses (n=1), extension of soft tissue infiltration (n=1) and/or epiduritis (n=1) or appearance of new locations (n=1)).