Pyd levels ($p=0.024$). There was a significant positive correlation between serum Pyd levels and joint erosion score ($r=0.285$, $p=0.049$). The serum Pyd levels had no demonstrable association with disease activity or functional capacity. Neither steroid nor biologic therapy influenced the levels of serum Pyd.

Conclusions: RA patients had significantly higher levels of serum Pyd compared to healthy controls. The serum Pyd levels had significant correlation with radiographic joint erosions which reflected disease damage.

REFERENCES:

- [1] Nemoto R, Nakamura I, Nishijima Y, Shiobara K, Shimizu M, Takehara T, et al. Serum pyridinoline crosslinks as markers of tumour-induced bone resorption. *Br J Urol.* 1997;80:274–80.
- [2] Plant MJ, Williams AL, O'Sullivan MM, Lewis PA, Coles EC, Jessop JD. Relationship between time-integrated C-reactive protein levels and radiologic progression in patients with rheumatoid arthritis. *Arthritis Rheum* 2000;43:1473–7.

Acknowledgements: The authors would like to thank the Research Committee of UKMMC for funding this research.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2378

AB0302 THE ROLE OF THE BIOMARKER 14-3-3 ETA IN RHEUMATOID ARTHRITIS: A REVIEW

S. Kilborn, M. Bukhari. *Medicine, Lancaster University, Lancaster, UK*

Background: Biomarkers are of much interest in rheumatoid arthritis (RA). Valid, reliable and convenient biomarkers, to detect early disease, predict severity and monitor treatment response are essential to achieving optimal outcomes. Several biomarkers have been suggested but are largely not validated. Validated measures of rheumatoid factor (RF), citrullination antibodies (ACPA), C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR) do not provide a complete picture. 14-3-3 η , a protein from a family of highly conserved regulatory molecules, has promising data as a novel RA biomarker and is the focus of this review.

Objectives: This review aimed to identify the literature characterising 14-3-3 η and its utility in RA.

Methods: Search terms 14-3-3 η , biomarker and rheumatoid arthritis were used in Pubmed, Web of Science and Embase databases and reference lists of relevant papers were scanned. Inclusion criteria were confirmed RA, 14-3-3 η and English language.

Results: Seven key papers were identified on 14-3-3 η proteins¹⁻⁶ and one on 14-3-3 η antibodies (14-3-3 η -Ab)⁷. **Detecting RA:** 14-3-3 η was elevated in patients with RA compared to healthy controls^{2,4} and patients with other diseases ($p<0.001$)⁴. Being positive for 14-3-3 η (>0.19 ng/mL) showed sensitivity and specificity of 63.3% and 92.6%⁴ to detect RA, increasing to 91.7% and 99.6%, respectively when an ROC-determined optimal cut-off of 0.879 ng/mL was used². When combined with current markers RF $\pm$ ACPA the detection capacity for early RA increased to 78% and for established RA to 96%, compared to 72% and 88%⁴, respectively for RF $\pm$ ACPA alone. Including the 14-3-3 η -Ab further increased detection⁷. The 14-3-3 η -Ab appeared at higher levels in early, treatment naïve RA, while no difference was seen in established RA compared to controls⁷. The 14-3-3 η -Ab was not associated with inflammatory markers ESR or CRP⁷. Although higher levels of the 14-3-3 η protein were detected in early RA ($p<0.05$), rate of detection was higher in established RA². **Predicting disease severity:** Baseline 14-3-3 η status was associated with increased disease severity^{1,2,3,4,5}, higher median DAS (6.3 vs 5.7, $p=0.026$) and HAQ scores (1.9 vs 1.0, $p=0.001$)⁴. Significant associations with baseline DAS28-ESR, CDAI and SDAI ($p<0.045$ – $p<0.001$) were also reported³. Physical symptoms are closely related to 14-3-3 η levels²; patients achieving DAS28-ESR-defined remission had significantly lower levels than non-remitters³. Radiographic progression was significantly associated with higher 14-3-3 η ^{1,5}, OR=6.2 (95%CI 1.3 to 30.2) in early RA and 2.5 (95%CI 1.0 to 1.4) in established RA⁵. Conflicting results on associations with existing markers ESR, CRP, RF, and ACPA have been reported^{1,2,3,4,5,6}. **Treatment response:** 14-3-3 η levels are dynamic with changing disease activity^{1,3}. Also, pre-treatment 14-3-3 η levels were an independent predictor of response to some therapies³.

Conclusions: 14-3-3 η protein and Ab are promising biomarkers in RA diagnosis, disease severity and response to treatment. Future research characterising the protein in RA and its relationship with validated biomarkers and composite measures, and expanding on the 14-3-3 η -Ab would be well directed.

REFERENCES:

- [1] *Arthritis Res Ther.* 2016;18:37.
- [2] *Clin Rheumatol.* 2017;36(11):2581–87.
- [3] *Arthritis Res Ther.* 2015;17:280.
- [4] *J Rheumatol.* 2014;41(11):2104–13.

[5] *Arthritis Res Ther.* 2014;16:R99.

[6] *Arthritis Res Ther.* 2016;18:76.

[7] *J Rheumatol.* 2015;42(9):1587–94.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.6614

AB0303 ULTRASOUND ASPECT OF POSTERIOR TIBIAL TENDON IN RHEUMATOID ARTHRITIS

S. Afilal¹, H. rkain¹, S. fellous¹, L. tahiri¹, N. alami¹, R. Guieu², Y. Jammes³, F. Allali¹, N. Hajjaj-Hassouni⁴. ¹Department of Rheumatology B, El Ayachi Hospital, Faculty of Medicine and Pharmacy of Rabat, Mohammed V University, Rabat, Morocco., Rabat, Morocco; ²UMR MD2 Faculty of Medicine, Aix-Marseille University, Marseille, France; ³UMR MD2 Faculty of Medicine, Aix-Marseille University, Marseille, France.; Marseille, France; ⁴Center for Pedagogical Innovation, Mohammed VI University of Health Sciences, Casablanca, Morocco, casablanca, Morocco

Background: Posterior tibial tendon involvement is common in rheumatoid arthritis. Ultrasound has an important place in the examination of this tendon.

Objectives: Evaluate the prevalence of ultrasound signs of posterior tibial tendon involvement in rheumatoid arthritis.

Methods: This is a cross-sectional study that included fourteen consecutive patients (100% female, mean age 55.3 years) with rheumatoid arthritis (median duration of progression of 13.5 years, mean specialised care of 2.1 years). A grey and Doppler ultrasound study was performed on affected feet, looking for effusion, thickening or corporal thinning, hypoechoic aspect, fissures, and Doppler activity in the posterior tibial tendon.

Results: 28 feet were studied with ultrasound evaluation of the posterior tibial tendon. Figure 1 illustrates the prevalence of the pathological aspects of the posterior tibial found on ultrasound examination.

Abstract AB0303 – Figure 1. Ultrasound aspects of the posterior tibial tendon in patients RA

Conclusions: This study illustrates the different pathological aspects of the posterior tibial tendon. It highlights the high prevalence of this tendinopathy in the rheumatoid foot. Ultrasound allows accurate assessment of this tendon in RA patients.

A large-scale study compared with a control group is necessary to better interpret and complete these preliminary results.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5925

AB0304 THE DELAY IN THE MANAGEMENT OF RHEUMATOID ARTHRITIS BY A RHEUMATOLOGIST IS ASSOCIATED WITH AN ALTERATION OF THE FUNCTION OF THE FOOT

S. Afilal¹, H. rkain¹, S. fellous¹, L. tahiri¹, N. alami¹, R. guieu², Y. jammes², F. allali¹, N. Hajjaj-Hassouni³. ¹Department of Rheumatology B, El Ayachi Hospital., Faculty of Medicine and Pharmacy of Rabat, Mohammed V University, Rabat, Morocco., Rabat, Morocco; ²UMR MD2 Faculty of Medicine, Aix-Marseille University, marseille, France; ³Center for Pedagogical Innovation, Mohammed VI University of Health Sciences, Casablanca, Morocco., casablanca, Morocco

Background: Impairment of foot function is known in rheumatoid arthritis.

Objectives: Evaluate the functional status of the foot in patients with RA and look for factors associated with impaired foot function.