SEROLOGICAL BIOMARKERS IN PATIENTS WITH EARLY AXIAL SPONDYLOARTHRITIS: CORRELATION WITH IMAGING AND DISEASE ACTIVITY IN 24-MONTHS FOLLOW UP (ITALIAN ARM OF SPACE STUDY)

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Background: Recently studies have focused on the role of new markers to diagnose early axial spondyloarthritis (axSpA), to evaluate disease activity (DA) and to predict patients (pts) at higher risk for a worse outcome. Common biomarkers, like fibrinogen, C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR) are often ineffective in assessing DA.

Objectives: To evaluate biomarkers and their correlations with clinical and DA indices and imaging in pts with early axSpA.

Methods: Seventy-five patients with low back pain (<3 months, ≤2 years, onset ≤45 years) participating in the Italian arm of the SpondyloArthritis-Caught-Early SPACE study underwent a physical examination, questionnaires, laboratory tests, X-rays and MRI of the spine and sacroiliac joints (SIJ) at baseline (T0) and during a 24-months follow-up. Two expert rheumatologists formulated axSpA diagnosis and assessed fulfilment of Assessment of SpondyloArthritis International Society ASAS criteria. The DA and physical functioning were assessed using Bath Ankylosing Spondylitis Metabolic Index (BASMII), Maastricht Ankylosing spondylitis Score, Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Functional Index (BASFI), Ankylosing Spondylitis Disease activity score (ASDAS), Visual Analogue Scale (VAS pain); VAS night pain; VAS disease activity; Bath Ankylosing Spondylitis Patient Global Score (BASG1), BASG2, Health Assessment Questionnaire (HAQ); ESR; hsCRP.

Results: FAR, fibrinogen, CRP and ESR were higher in AS patients compared with healthy controls (P ≤ 0.05), while albumin was lower (P < 0.05). ROC results showed that area under curve (AUC) of FAR (0.818, 95%CI: 0.760 - 0.876) and albumin (0.841, 95%CI: 0.788 - 0.984) were higher than fibrinogen (0.772, 95%CI: 0.707 - 0.836), CRP (0.677, 95%CI: 0.598 - 0.756) and ESR (0.784, 95%CI: 0.721 - 0.847). Positive correlations were found between FAR and BASDAI (r = 0.488, P < 0.001), CRP (r = 0.858, P < 0.001) and ESR (r = 0.817, P < 0.001). Besides, FAR, fibrinogen, CRP and ESR in active group were higher than remission group (P < 0.05), while albumin was lower (P < 0.05). ROC results showed that AUC of FAR (0.691, 95%CI: 0.598-0.786) was higher than fibrinogen (0.676, 95%CI: 0.577 - 0.776), albumin (0.665, 95%CI: 0.567 - 0.763), CRP (0.646, 95%CI: 0.545 - 0.746) and ESR (0.667, 95%CI: 0.569 - 0.766). FAR was a risk factor of the disease activity in AS patients (OR: 1.354, 95%CI: 1.067 - 1.718, P = 0.013).

Conclusion: FAR was increased in AS patients compared with healthy controls and significantly correlated with the disease activity of AS. FAR might be a potential useful inflammatory biomarker to monitor disease activity of AS patients.

REFERENCES

Acknowledgement: Natural Science Foundation of Guangdong Province (No. 2017A030313526), Youth Foundation of Guangdong Second Provincial General Hospital (No. YQ2017-009).

Disclosure of Interests: None declared


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Objectives: To systematically locate, critically appraise, compare and sum-
understanding of their strengths and limitations.

Background: The Brief Pain Inventory (BPI-SF) and McGill Pain Questionnaire (SF-MPQ-2) are general-use, self-report, multidimensional pain assessment outcomes frequently used for pain assessment in musculoskeletal (MSK) conditions. Synthesizing knowledge on their measurement properties, as assessed in MSK conditions, should provide a deeper understanding of their strengths and limitations.

Objectives: To systematically locate, critically appraise, compare and sum-
marize clinical evaluation research about the BPI-SF and SF-MPQ-2 in pain-related musculoskeletal conditions.

Methods: Four databases (Medline, CINAHL, EMBASE & SCOPUS) were
searched for relevant citations, each for the BPI-SF and SF-MPQ-2. We included articles that reported the psychometric properties (e.g. validity, reliability, responsiveness) and interpretability indices (e.g. minimal clinical important difference) of both tools, as assessed in mixed and specific MSK studies. Independently, two reviewers extracted data and assessed the quality of evidence with a structured quality assess-
ment tool for measurement studies and according to the updated CON-
sensus-based Standards for the selection of health Measurement In-
stuments (COSMIN) guidelines.

Results: Twenty-five articles were included (BPI-SF, n=17; SF-MPQ-2, n=8). Both tools lack reporting on their cross-cultural validities and measure-
ment error indices. High quality studies suggest that they are internally consistent (α = 0.83-0.96), and they associate modestly with similar out-
come measures (r = 0.3-0.69). There is evidence that the BPI-SF conforms to its two-dimensional structure in MSK studies; the SF-MPQ-2 four-factor structure was not clearly established. In seven reports, high to moderate quality evidence was seen in supports of the BPI-SF known group validity (n=2) and responsiveness (n=5) but none was available for the SF-MPQ-2. Furthermore, the SF-MPQ-2 was more frequently associ-
ated with floor effects in MSK studies than the BPI-SF (SF-MPQ-2, 42% vs BPI-SF, 6%).

Conclusion: The SF-MPQ-2 has emerging evidence whereas the BPI-SF evidence is more mature. Both tools displayed high-quality evidence in support of their internal consistency and criterion-convergent validities. High to moderate quality evidence suggests the BPI-SF subscales have a better responsiveness, retest reliability, known group validity and struc-
tural validity than the SF-MPQ-2.

REFERENCES


Disclosure of Interests: None declared


THE PRELIMINARY VALIDATION OF LASER DOPPLER FLOWMETRY IN SYSTEMIC SCLEROSIS ACCORDING TO THE OMERACT FILTER: A SYSTEMATIC REVIEW

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Background: Systemic sclerosis (SSc) is characterised by a widespread vasculopathy. The vasculopathy comprises the skin microcirculation and results in features such as Raynaud’s phenomenon (RP) and digital trofics lesions. The quantification of the skin blood perfusion at the level of the finger (FBP) is a major need in the assessment of SSc in clinical and research setting. Up to now, laser doppler flowmetry (LDF) has been the most thoroughly investigated instrument to assess the FBP in SSc.

Objectives: To investigate the validation status of LDF in SSc according to the Outcome Measures in Rheumatologic Clinical Trials’ (OMERACT) filter.

Methods: Literature was systematically reviewed to detect all reports in which the assessment of the FBP in SSc patients was described. The OMERACT filter, including the domains of truth, discrimination and feasibility was applied and a quality assessment was done by the Good Methods Checklist. Comparison between studies was realized by grouping the results per dynamic test situation (basal circumstances, cold/heat challenge and occlusion).

Results: The systematic search resulted in 4340 hits. After title and abstract screening 228 hits remained and of these, 79 full texts described the assessment by LDF. Fifty studies were included for quality assessment of which 17 studies were retained for conclusion making (fig 1).

An overview of the validation status of LDF is given in table 1. Expert consensus is lacking on the face and content validity of LDF in SSc. The construct validity of LDF is partially validated (e.g. the correlation with laser speckle contrast imaging was attested in one study). Conflicting results exist on the discriminant capacity of LDF to distinguish healthy from diseased, primary from secondary RP and to differentiate between disease subsets. The addition of a heat challenge, as well as the evaluation of the postocclusion LDF measurement, has the potential to elicit a difference between healthy and diseased. Lastly, there are no data on the feasibility of LDF in SSc.

Disclosure of Interests: None declared


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