**AB1056**

**ASSESSMENT OF PULMONARY CIRCULATION WITH STRESS ECHOCARDIOGRAPHY INankylosing spondylitis and psoriatic arthritis**

**Keywords:** Imaging, Cardiovascular disease, Spondyloarthritis

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**Background:** Extra-articular features are common in ankylosing spondylitis (AS) and in psoriatic arthritis (PsA). Cardiac involvement are less frequent but may be severe. The anterior chest wall pain and sterno-costal arthritis can lead to reduced chest expansion, which may contribute to the progression of cardiovascular manifestations. We aimed to assess the response of the pulmonary circulation unit during stress in AS and PsA patients.

**OBJECTIVES:**

- A total of 71 patients were enrolled in the study: 28 of them had AS (aged 50.8±11.8 years); 17 APs (age 52.1±13.5 years), and 26 were healthy individuals (age 54.23±9.9 years). 74.1 % of AS patients, 11.1 % of PsA patient had ankylosis at the time of assessment. To the maximally tolerated workload, all subjects underwent rest and exercise stress echocardiography on a supine bicycle ergometer. Echocardiographic measurements were taken at rest, at 50 watts workload, and at maximal exercise.

**Results:** AS patients had significantly higher pulmonary artery systolic pressure (PASP; AS: 32.6±16.8 mmHg, PsA: 21.6±12.7 mmHg, p<0.05) and pulmonary vasoconstriction (PVR; AS: 1.3±0.4 WU, PsA: 1.1±0.3 WU, p<0.05) at maximal workload, while the right ventricular-pulmonary arterial (RV-PA) coupling at peak stress was higher in APs patients (AS: 1.2±0.6 mmHg/mmHg, PsA: 1.8±1.1 mmHg/mmHg, p<0.05).

Comparing to the control group, AS and PsA patients had significantly higher resting PASP (control: 12.6±6.4 mmHg; AS: 22.8±7.5 mmHg, p<0.001; PsA: 21.4±7.0 mmHg, p<0.001), lower resting RV-PA coupling (control: 2.7±1.4 mmHg/mmHg; AS: 1.3±0.4, p<0.001; PsA 1.3±0.4 mmHg/mmHg, p<0.001), and higher peak PVR (control: 0.6±0.4 WU; AS: 1.3±0.4, p<0.001; PsA: 1.1±0.3 WU, p<0.005). One-way analysis of variance of the three groups also showed significant differences in the resting PASP (p<0.001), peak PASP (p<0.05), resting RV-PA coupling (p<0.001), peak PVR (p<0.001). At maximal workload, the AS patient had higher E/e’ in ankylosing group.

**Conclusion:** Stress echocardiography is a promising, radiation-free method for assessing the subclinical cardiopulmonary changes among AS and PsA patients.

The changes of PVR during stress may highlight the pulmonary complications in the subclinical stage. Higher E/e’ in ankylosing group can refer to the influence of ankylosis on the left ventricular filling.

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**INTERPRETATION OF DISEASE-SPECIFIC QUESTIONNAIRES ON DISEASE ACTIVITY, FUNCTIONAL CAPACITY AND QUALITY OF LIFE IN DAILY PRACTICE IN AXIAL SPONDYLOARTHRITIS**

**Keywords:** Spondyloarthritis, Outcome measures, Patient reported outcomes

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**Background:** In axial spondyloarthritis (axSpA), assessment of disease activity and physical function in clinical studies relies on patient-reported outcomes (PRO) such as patient’s global, BASDAI, ASDAS and BASFI. However, it still remains unclear how response criteria adequately reflects the patients’ opinion on disease status in daily practice.

**Objectives:** Investigate whether the results of PROs used in clinical studies with axSpA are indeed related to patient’s opinion on disease status as reported in daily clinical routine.

**Methods:** Data were retrieved from the very first and from the last five visits within a timeframe of 5 years. Patient’s clinical characteristics, physician’s global assessment and PROs (ASDAS, BASDAI, BASFI) were assessed at each visit. Status and change of all assessed information during follow-up were compared with patient’s opinion on symptoms related to axSpA, categorized into absent, mild, severe or very severe.

**Results:** 3.120 visits with median follow-up (IQR) 4.7 (4.3) years from 557 axSpA patients were analyzed. Absent/mild symptoms were stated in 98.7% and 90.9% of visits with inactive or low ASDAS disease status, while in 67.9% and 39.3% of visits showing association to high or very high ASDAS disease activity status, respectively (Figure 1). In comparison, BASDAI<4 was found in 90.8% of visits with absent/mild symptoms, while BASDAI≥4 showed severe symptoms in 48.1% of visits (Figure 1). Achievement of ASAS40 was associated with 92.4% visits reporting absent/mild symptoms, while this was the case in 76.4% visits despite not reaching ASAS40. Similar data were observed for ASAS20. Severe symptoms were reported in 0.6% patients achieving vs. 30.1% patients not achieving ASAS partial remission (PR). BASFI correlated with patients’ opinion regarding symptoms at each visit.

**Conclusion:** Low disease activity as assessed by ASAS or BASDAI were associated with mild symptoms in the majority of visits over a period of up to 5 years. Interestingly, a large proportion of visits showed low disease activity even when not achieving ASAS20 or ASAS40 responses or ASAS-PR.