size and frequency of SIJ BME as defined by the Aarhus scoring module,⁴ were compared across clusters.

Results: MCA and cluster analysis revealed 3 clusters. Cluster 1 was predominantly HLA-B27 positive (96.7%) with SIJ BME in half of the cases. Cluster 2 and 3 had SIJ BME in all cases. Cluster 3 had fewer features suggestive of axSpA than clusters 1 and 2. There were significant differences in frequency (3.0 vs 2.0 vs 1.0) and extent of BME (4.0 vs 2.0 vs 1.0) across clusters 1, 2 and 3.

Abstract THU0240 – Table 1. Cluster-wise comparison of the construction variables, frequency and size of sacroiliac joint bone marrow oedema*

Characteristic	All (n=134)	Cluster 1 (n=30)	Cluster 2 (n=45)	Cluster 3 (n=59)	p-value†
Male	42.5	53.3	40.0	39.0	NS
Age category (years)					
≤25	18.7	26.7	6.7	23.7	<0.05 ^{4,6}
26-32	29.9	23.3	40.0	25.4	NS
≥33	51.5	50.0	53.3	50.8	NS
SIJ BME	88.8	50.0	100.0	100.0	<0.001 ^{4,6}
HLA-B27 positive	30.6	96.7	17.8	6.8	<0.001 ^{4,6}
Inflammatory back pain	58.2	73.3	95.6	22.0	<0.01 ⁴ , <0.001 ^{4,6}
Arthritis	20.1	46.7	26.7	1.7	<0.001 ^{4,6}
Heel enthesitis	19.4	26.7	35.6	3.4	<0.01 ⁴ , <0.001 ⁴
Uveitis	2.2	3.3	4.4	0.0	NS
Psoriasis	4.5	3.3	8.9	1.7	NS
Inflammatory bowel disease	1.5	6.7	0.0	0.0	NS
Good response to NSAIDs	35.1	63.3	48.9	10.2	<0.001 ^{4,6}
Family history of SpA ⁴	18.9	40.0	28.9	0.0	<0.001 ^{4,6}
Elevated CRP	13.4	30.0	4.4	11.9	<0.01 ⁴ , <0.05 ⁶
Among patients with SIJ BME					
Frequency of BME (1-8) ⁴	2.0 (2.0)	3.0 (5.0)	2.0 (2.0)	1.0 (1.0)	<0.01a, <0.001b, <0.05c
Size of BME (1-24) ⁴	2.0 (2.0)	4.0 (7.0)	2.0 (3.0)	1.0 (1.0)	<0.01a, <0.001b, <0.05c

* Values are percent of patients or medians with interquartile ranges; †Kruskal-Wallis and Dunn's test for multiple comparisons; ‡Cluster 1 vs Cluster 2; §Cluster 1 vs Cluster 3; ¶Cluster 2 vs Cluster 3; ††missing in 2 patients; ‡‡Frequency of BME was defined as the total count of lesions, i.e. 4 locations per joint; §§Size of BME was graded as slight(<25%), moderate (25% to <50%), or severe (≥50%) extent of BME in the cartilaginous and ligamentous part of the corresponding sacral and iliac subchondral bone area, i.e. 4 locations per joint, and combined into a total score.

Abbreviations: SIJ, sacroiliac joints; BME, bone marrow edema; MRI, magnet resonance imaging; HLA-B27, Human Leukocyte Antigen B27; NS, not significant; NSAIDs, non-steroidal anti-inflammatory drugs; CRP, C-reactive protein; NS, not significant

Conclusions: Three clusters were identified among LBP patients with findings suggestive of axSpA: 1 predominantly HLA-B27 positive cluster with SIJ BME in half of the subjects, and 2 clusters having less features suggestive of SpA and with SIJ BME in all subjects. The predominantly HLA-B27 positive cluster had more and larger BME lesions than the other 2, which may indicate individuals at risk for progression.

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THU0241 MUSCULOSKELETAL INVOLVEMENT IN INFLAMMATORY BOWEL DISEASE'S PATIENTS: A MONO CENTRIC EXPERIENCE

A. Delle Sedie¹, L. Ceccarelli², L. Carli¹, F. Costa², S. Marchi², M. Mosca¹.
¹Rheumatology Unit, ²University Gastroenterology Unit, University of Pisa, Pisa, Italy

Background: Musculoskeletal symptoms are frequently reported by patients with inflammatory bowel diseases (IBD). Those symptoms may vary from arthralgia to arthritis, involving peripheral or axial joints, with a prevalence ranging from 17% to 62% when considering any SpA manifestation (with a similar range for axial or peripheral involvement from 5% to 30%) and a definite SpA diagnosis up to 46%.^{1–10} To date, a more comprehensive approach is needed, also because the use of DMARDs or biologics could improve both gastrointestinal and musculoskeletal symptoms.

Objectives: To evaluate the rate of MSK involvement in a mono centric cohort of IBD patients.

Methods: A questionnaire based on the features of SpA was used in the IBD out-patient clinic from January 1st to December 31st 2017. When there was a positivity for any feature, the patients were evaluated by a rheumatologist (with more than 18 years of experience in SpA). All the visits were performed in 2–3 weeks from the moment the questionnaire was performed (varying according to the seasonal time for holidays). When there were some doubts about the diagnosis, further examinations were requested.

Results: A total of 403 patients were visited in the out-patient clinic (220 affected by CD, 172 affected by UC and 11 with a not defined IBD). Fifty-nine patients were sent to the rheumatologist (33 CD, 24 UC and 2 not defined IBD). Eleven patients had 2 or more rheumatologic visits (to follow-up the disease and check the results

of the exams requested). To allow a diagnosis, 4 sacroiliac joints MRI and 1 ultrasound assessment of the feet were requested. A diagnosis of peripheral SpA was given in 9 patients while axial SpA was diagnosed in 7 subjects. The diagnosis was fibromyalgia, osteoarthritis and arthralgia in 1, 2 and 40 patients, respectively. Therapy was modified in 16/59 patients after the rheumatologic assessment (DMARDs were prescribed in 12 subjects while anti-TNFα in 4 of them). In 1 patient (with absolute contraindication for biologic therapy), two courses of SI joint injection were performed, improving local pain.

Conclusions: The results of our study confirm the already published prevalence of musculoskeletal involvement in IBD patients (15% of our IBD population complained musculoskeletal pain and 27% of the patients sent to the rheumatologist were given an enteropathic arthritis diagnosis). As for the already existing literature, we did not notice any evident difference in the prevalence of axial and peripheral involvement. An established collaboration between gastroenterologists and rheumatologists is necessary to provide an integrated and more comprehensive management of IBD, improving the quality of life of the patients.^{11–12}

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THU0242 PREGNANCY OUTCOMES AND DISEASE ACTIVITY IN WOMEN WITH AXIAL SPONDYLOARTHRITIS: A SYSTEMATIC LITERATURE REVIEW

A. Molto¹, L. Gensler², M.E.B. Clowse³, H. Marzo-Ortega⁴, A. Artignan⁵, D. Goff-Leggett⁵, S. Leonard⁵, H.K. Resemann⁵, E. Thurtell⁵, N. de Peyrecave⁶, C. Ecoffet⁷, F. Förger⁸.
¹Rheumatology Department, Hôpital Cochin, AP-HP, Paris, France; ²University of California, San Francisco, San Francisco, CA; ³Duke University Medical Center, Durham, NC, USA; ⁴NIHR LBRC, Leeds Teaching Hospitals Trust and LIRMM, University of Leeds, Leeds; ⁵Costello Medical, Cambridge; ⁶UCB Pharma, Slough, UK; ⁷UCB Pharma, Brussels, Belgium; ⁸University of Bern, Bern, Switzerland

Background: Women with axial spondyloarthritis (axSpA) are often affected by the disease during their reproductive years,¹ but reports on disease activity and pregnancy outcomes in these patients (pts) are sparse. In women with ankylosing spondylitis (AS), also currently termed as radiographic axSpA, a higher risk of disease activity flares and prevalence of adverse pregnancy outcomes have been reported vs healthy controls; however, in non-radiographic (nr)-axSpA pts, such data are virtually non-existent.^{2,3}

Objectives: To review the available evidence on the relationship between axSpA disease activity and pregnancy, including foetal outcomes.

Methods: A systematic literature review was conducted in October 2017 by searching EMBASE, MEDLINE[®], the Cochrane Database of Systematic Reviews, and the Database of Abstracts of Reviews of Effects. Publications were systematically screened for English language articles on observational studies of axSpA pts reporting pregnancy outcomes or disease activity during pregnancy. Studies utilising agents contraindicated in pregnancy were excluded. Supplementary searches of selected, 2016–17 conference proceedings and bibliographies of relevant review articles were also conducted.

Results: 2216 publications were reviewed, with 20 publications on 15 unique studies meeting the inclusion criteria. When utilising the verified disease activity measurement instruments, Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) or Ankylosing Spondylitis Disease Activity Score C-Reactive Protein (ASDAS-CRP), 5 studies (3 prospective, 2 retrospective) reported active disease (as described by individual studies; table 1) both during pregnancy and postpartum in most pts. Pregnancy outcomes in axSpA pts were compared with healthy controls in 6 studies (3 retrospective, 2 prospective, 1 case-control), the 3 largest of which (including 1 prospective) revealed higher risk or odds of preterm births in axSpA pts. Higher rates or risk of low birth weight/small-for-gestational-age neonates were shown in pts vs controls in 2/5 studies reporting such outcomes. Stillbirths, miscarriages or foetal loss/abortion were found to occur at similar rates in both populations.

Conclusions: Robust, prospective data on disease activity during pregnancies of women with axSpA are limited. Within the samples reported here, available data suggest that there may be a small increase in pre-term births; no signal for increased pregnancy loss was detected. Further research is needed to investigate relationships between maternal disease activity and pregnancy outcomes in axSpA.

Abstract THU0242 – Table 1. Maternal disease activity and pregnancy outcomes in axSpA patients

Maternal axSpA disease activity during pregnancy and postpartum				
Study	Population[a]	Instrument	Activity during pregnancy[b]	Activity postpartum[c]
Ursin 2017[d]	axSpA: 181/168	BASDAI	Stable, low disease activity (2nd trimester: BASDAI=3.97)	Stable, low disease activity (6 weeks pp: BASDAI=3.46)
Förger 2009[e]	AS[f]: 10	BASDAI	Moderate disease activity	Stable (2/10)
Förger 2005[e]	AS[g]: 10	BASDAI	Clinical improvement (4/10)	Increased by 50% (8/10)
van den Brandt 2017[e]	axSpA[g]: 37	ASDAS-CRP	Remained active (6/10)	Not reported
Timur 2016[d]	AS[h]: 20	ASDAS-CRP	Persistent high activity[i]	Persistent high activity[i]
			Decreased score (14/20)	Decreased score (2/20)
			Unchanged score (6/20)	Unchanged score (3/20)
				Increased score (15/20)
Pregnancy outcomes of axSpA patients and healthy controls				
Study	Populations[a]	Incidence per pregnancies vs controls (p value)		
	AS: 2492	Preterm birth: 148/2492 vs 106/1412, 347,847 (aOR [95% CI]: 1.18 [1.00–1.38]) <0.05		
	Controls: 2,347,847	Birth weight <2500 g: 173/2492 vs 151,048/2,347,847 (aOR [95% CI]: 1.06 [0.91–1.22] NS)		
		SGA: 221/2492 vs 227,984/2,347,847 (aOR [95% CI]: 0.97 [0.85–1.11] NS)		
		Stillbirth: 17/2492 vs 17,346/2,347,847 (aOR [95% CI]: 0.81 [0.50–1.30] NS)		
Förger 2017[c]	axSpA: 78/70	Preterm birth: higher risk		
	Controls: 70	SGA: higher risk		
Park 2017[c]	AS: 27/20	Preterm birth: Data not reported (NS)		
	Controls: 108	Low birth weight: 22.2% vs 8.3% (0.024)		
Timur 2016[d]	AS[i]: 20	Preterm birth: 3/20 vs 3/40 (0.390)		
	Controls: 40	Birth weight <2500 g: 5/20 vs 3/40 (0.150)		
Jakobsson 2016[m]	AS[j]: 199	Preterm birth: 22/199 vs 21/477 (aOR [95% CI]: 2.62 [1.27–5.39] for untreated patients; 1.79 [0.55–5.82] NS for NSAID-treated patients)		
	Controls: 477	SGA: 5/199 vs 6/477 (aOR [95% CI]: 1.34 [0.37–4.85] NS for untreated patients; 4.47 [0.95–20.8] NS for NSAID-treated patients)		
Ostensen and Husby 1983[k]	AS[l]: 13	Preterm birth: 1/13 vs 0/31		
	Controls: 31	Stillbirth: 0/13 vs 1/31		

[a] Pregnancies/Women (if not equal); [b] Cases per total pregnancies (n/N); [c] Congress abstract; [d] Retrospective data; [e] Prospective data; [f] modified New York criteria; [g] ASAS classification criteria; [h] ASDAS-CRP: 2.1–3.5; [i] aOR [95% confidence interval]; [j] Crude odds ratio significant at 1.19 (1.03–1.38); [k] Case-control study; [l] ICD-10; [m] aOR: adjusted odds ratio; AS: ankylosing spondylitis; ASDAS-CRP: ankylosing spondylitis disease activity score-C-reactive protein; axSpA: axial spondyloarthritis; BASDAI: Bath ankylosing spondylitis disease activity index; NS: not significant; NSAID: non-steroidal anti-inflammatory drug; pp: postpartum; SGA: small-for-gestational-age.

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THU0243 CASE FATALITY OVER 365 DAYS AFTER FIRST ACUTE CORONARY SYNDROME IN PATIENTS WITH ANKYLOSING SPONDYLITIS

A. Södergren¹, J. Askling², K. Bengtsson³, H. Forsblad-D'Elia¹, T. Jernberg⁴, U. Lindström³, L. Ljung^{1,2}, Å. Mantel², L.T. Jacobsson³. ¹Dept of public health and Clinical medicine/Rheumatology, Umeå University, Umeå; ²Clinical Epidemiology Section, Department of Medicine Solna, Karolinska Institutet, Stockholm; ³Department of Rheumatology and Inflammation Research, Sahlgrenska Academy at University of Gothenburg, Gothenburg; ⁴Dept of clinical sciences, Danderyd University Hospital, Karolinska Institutet, Stockholm, Sweden

Background: Ankylosing spondylitis (AS) is characterised by systemic and local inflammation of the axial skeleton, joints, and entheses. Studies have suggested a higher risk of acute coronary syndrome (ACS) among patients with AS compared with the general population, but whether patients with AS also have an increased fatality following ACS is not known.

Objectives: Is AS associated with an increased case fatality after a first-time ACS compared with the general population?

Abstract THU0243 – Table 1. Mortality and hazard ratios (HR) for patients with AS and general population referents during 365 days of follow up after a first ACS

	Start		At 30 days follow up		At 365 days follow up		
	Individuals at risk	Individuals at risk	n deaths	HR (95% CI) day 0–30	Individuals at risk	n deaths	HR (95% CI) day 31–365
AS	292	273	26	0.9 (0.6;1.5)	266	56	2.0 (1.3;3.1)
General population comparator	1276	1204	118	ref	1158	184	ref

Methods: From the Swedish National Patient Register (NPR) we identified all patients registered with AS Jan 2001 through Dec 2014 and a later registration of a first time ACS between Jan 2006 and Dec 2014 (n=292). As a general population comparator, we identified up to 5 individuals per index-patient (n=1276), matched on year of first ACS and birth, gender, and place of living. The follow-up period began at the date of admission for ACS and extended until death, emigration, 365 days of follow-up or 31 December 2014, whichever occurred first. Hazard ratios (HR) for death in the AS group vs. the general population comparator was assessed using Cox regression. We assessed HRs for death in two intervals: 30 day mortality (day 1 through 30), and mortality day 31 through 365.

Results: During the 365 days following the ACS, 56 (19%) of the 292 AS patients and 184 (14%) of the 1276 population controls died (table 1). Whereas the 30 day mortality in the AS group was not elevated (HR=0.9), the mortality day 31 through 365 was doubled compared with the general population (HR=2.2, table 1 and figure 1).

Abstract THU0243 – Figure 1. Kaplan-Meier curves showing survival after first ACS in patients with AS and general population referents during 365 days follow up.

Conclusions: Patients with AS were at increased risk of death during the first year, though not during the first month, following ACS. It is yet not clear whether this could be due to factors associated with the AS disease *per se*, or differences in ACS characteristics or treatment.

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THU0244 HIGH PREVALENCE OF CLINICAL SPONDYLOARTHRITIS FEATURES IN PATIENTS WITH HIDRADENITIS SUPPURATIVA

A. Rondags¹, K.R. van Straalen², S. Arends³, H.H. van der Zee², E. Prens², B. Horvath¹, A. Spoorenberg³. ¹Dermatology, University of Groningen, University Medical Center Groningen, Groningen; ²Dermatology, Erasmus Medical Center, Rotterdam; ³Rheumatology and Clinical Immunology, University of Groningen, University Medical Center Groningen, Groningen, Netherlands

Background: Hidradenitis suppurativa (HS) is a chronic debilitating inflammatory skin disease and is associated with several comorbidities. HS and spondyloarthritis (SpA) share several pathophysiological and clinical features, such as elevated cytokine levels of TNF- α and IL-17 and the association with inflammatory bowel