

Spondyloarthritis: Analysis of a Brazilian series compared with a large Ibero-American registry (RESPONDIA group)

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ABSTRACT

Recent studies have outlined the clinical and epidemiological profile of the spondyloarthritides in Ibero-American countries. The objective of this study was to compare the data collected in a Brazilian epidemiological study with the data obtained from other Ibero-American countries that used the same protocol of investigation. The Brazilian series presented a higher frequency of patients with ankylosing spondylitis (72.3% Brazilian vs. 57.7% Ibero-American), being associated with the male gender (73.6% vs. 66.0%) and histocompatibility antigen positive HLA-B27 (65.9% vs. 51.8%). Regarding the treatment, hormonal anti-inflammatory drugs – NSAIDS were more frequently prescribed to Brazilian patients (77.0% vs. 71.2%) and less often, corticosteroids (7.5% vs. 18.5%).

Keywords: epidemiologic study, characteristics as topic, epidemiologic measurements, demographic data, Brazil.

INTRODUCTION

The spondyloarthritis (SpA) constitute a group of rheumatic diseases of immunological origin with a familial pattern, which affect predominantly the axial skeleton and can also affect the peripheral joints and entheses, mainly of the lower limbs. The SpA, and especially the ankylosing spondylitis (AS), have a significant association with the HLA-B27 histocompatibility antigen.¹

In 2008, the name “spondyloarthritis” was proposed and globally accepted, which emphasizes the axial (spondylo) and peripheral (arthritis) nature of the group. The group of the SpA comprehends the AS, the psoriatic arthritis (PA), the reactive arthritis (RA), the undifferentiated spondyloarthritides and the arthritides associated with inflammatory bowel diseases, especially Crohn’s disease and ulcerative colitis.¹

Since 2005, more than 100 university centers from 10 countries have participated in the work group of the Registro Ibero-Americano de Espondiloartrites – RESPONDIA (The Ibero-American Registry of Spondyloarthritis).

The idea arose with the support of the Spanish Society of Rheumatology (SER), which decided to apply the protocol of investigation of the REGISPONSER (Registro de Espondiloartrites da Sociedade Espanhola de Reumatologia) group in Ibero-American countries.² The objective was to document demographic data (sex, age, time of disease, age at symptom onset, family history, HLA-B27), clinical data (percentage of the diagnoses of different SpA, measurements of axial and peripheral assessment, enthesitis, treatment) and quality of life.² The Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Functional Index (BASFI), Bath Ankylosing Spondylitis Radiology Index (BASRI) and the SF-12 quality of life instrument (SF-12 ASQOL) were also validated (for the Spanish and Portuguese languages) and analyzed.

The objective of this article is to describe the clinical and demographic data and clinimetric parameters of Brazilian patients with SpA and from other nine Ibero-American countries. All articles selected for the research were part of the

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RESPONDIA study and analyses carried out in Argentina,³ Brasil,⁴ Chile,⁵ Costa Rica,⁶ Spain,⁷ Mexico,⁸ Peru,⁹ Portugal,¹⁰ Uruguay¹¹ and Venezuela¹² were published. The results were presented in descriptive form and the weighted means of all results from the several countries were launched, when available.

The RESPONDIA group evaluated 4,405 patients in ten Ibero-American countries, with 2,367 of them being from Spain (53.7%), 1,036 from Brazil (23.5%), 405 from Argentina (9.2%), 172 from México (3.9%), 109 from Chile (2.4%), 101 from Portugal (2.3%), 69 from Venezuela (1.5%), 60 from Peru (1.3%), 53 from Uruguay (1.2%) and 33 from Costa Rica (0.7%). Some data were not reported by all countries.

The Ibero-American series, excluding the Brazilian patients, consisted of 3,360 patients, with a mean age of 46.5 years. Of the total, 2,223 individuals were males (66%) with a mean age at

symptom onset of 30.7 years and time of disease of 15.8 years. The Brazilian series analyzed 1,036 patients, with a mean age of 43.7 years. Of the total number of Brazilian patients, 763 individuals were males (73.6%), with a mean age at symptom onset of 31 years and time of disease of 12.7 years (Table 1).

The Ibero-American sample showed a predominance of patients with ankylosing spondylitis (AS), which affected 1,943 patients (57.7%), followed by PA in 697 patients (20.7%), and undifferentiated spondyloarthritis in 183 (5.4%). The Brazilian series of 1,036 patients also showed a predominance of AS (72.3%), followed by PA (13.7%) and undifferentiated SpA (6.3%) (Table 2).

Among the studied patients from eight countries, including Brazil, AS was the disease with the highest frequency, varying from 45.5% to 83.1%. Only in Argentina PA was the most

Table 1. Data obtained from patients with SpA from the RESPONDIA study, compared with the values obtained from Brazilian patients regarding the number of patients, age at onset, time of the disease and age of the studied patients

	Argentina	Chile	Spain	MEXico	Peru	Portugal	UruguaY	Venezuela	Costa Rica	Total Iberian countries	BRAZIL
Number of patients	405	109	2,367	172	60	101	53	69	33	3,369	1,0w36
Men (n)	238	66	1,622	102	39	59	35	43	19	2223	763
Men (%)	58.8%	60.6%	68.5%	59.3%	65.0%	58.4%	66.0%	62.3%	57.6%	66.0%	73.6%
Women (n)	167	43	745	70	21	42	18	26	14	1146	273
Women (%)	41.2%	39.4%	31.5%	40.7%	35.0%	41.6%	34.0%	37.7%	42.4%	34.0%	26.4%
Age at onset (yrs)	38.4	35.3	29.6	28.0	30.6	26.7	31.0	29.4	34.5	30.7	31.0
Time of disease (yrs)	9.7	6.7	18.0	10.1	9.7	19.8	10.2	11.5	6.8	15.8	12.7
Mean age (yrs)	48.1	42.0	47.6	38.1	40.3	46.5	41.2	40.9	41.3	46.5	43.7

SpA = spondyloarthritis; n = number.

Table 2. Data obtained from patients with SpA from the RESPONDIA study, compared with values obtained from Brazilian patients regarding the prevalence of the several diagnoses within the group of SpA diseases

	Argentina	Chile	Spain	Mexico	Peru	Portugal	Uruguay	Venezuela	Costa Rica	Total Iberian countries	BRAZIL
Number of patients	405	109	2,367	172	60	101	53	69	33	3,369	1,036
AS (n)	123	64	1456	103	32	84	28	38	15	1,943	749
AS (%)	30.4%	58.7%	61.5%	59.9%	53.3%	83.2%	52.8%	55.1%	45.5%	57.7%	72.3%
PA (n)	189	28	414	26	4	12	9	15	-	697	142
PA (%)	46.7%	25.7%	17.5%	15.1%	6.7%	11.9%	17.0%	21.7%	0.0%	20.7%	13.7%
undif SpA (n)	50	8	50	34	8	0	10	8	15	183	65
undif SpA (%)	12.3%	7.3%	2.1%	19.8%	13.3%	0.0%	18.9%	11.6%	45.5%	5.4%	6.3%
RA (n)	26	1	45	5	1	3	-	-	-	81	37
RA (%)	6.4%	0.9%	1.9%	2.9%	1.7%	3.0%	0.0%	0.0%	0.0%	2.4%	3.6%
EA (n)	-	6	24	3	-	2	2	3	-	40	10
EA (%)	0.0%	5.5%	1.0%	1.7%	0.0%	2.0%	3.8%	4.3%	0.0%	1.2%	1.0%
JSpA (n)	7	2	12	-	15	-	4	3	-	43	32
JSpA (%)	1.7%	1.8%	0.5%	0.0%	25.0%	0.0%	7.5%	4.3%	0.0%	1.3%	3.1%

AS = Ankylosing spondylitis; PA = psoriatic arthritis; undif SpA. = undifferentiated spondyloarthritis; RA = reactive arthritis; EA= enteropathic arthritis; JSpA = Juvenile spondyloarthritis.

frequent diagnosis, present in 46.7% of the individuals (versus 30.4% of patients with AS). The subsequent extension of the RESPONDIA study will include more patients with a diagnosis of RA and enteropathic arthritis (EA). The age at symptom onset was similar in both groups. There was also a predominance of male patients, as most of them had a diagnosis of AS.

Due to the high degree of racial heterogeneity observed in Latin-American countries, varying even from country to country (mainly regarding the indigenous and mixed populations) the variable ethnicity/race was not included in this series of articles and will be addressed in a future publication.

The HLA-B27, generally present in around 90% of patients with AS in non-mixed populations, was positive in 69.5% of the Brazilian patients and 51% of the Ibero-American patients. The lower frequency of HLA-B27 is probably associated with the higher degree of population heterogeneity observed in Latin America.

Among Brazilian patients, inflammatory low-back pain was the most common initial symptom, reported by 65.5% of the patients. The mixed involvement (axial, peripheral and entheses) was predominant, present in 47.9% of the cases; purely axial disease occurred in 36.7% of the patients, with initial peripheral articular involvement in 10.7% and enthesitis

in 24.7%. The hip was the most often affected joint (51.6%). The most often observed extra-articular involvement was anterior uveitis in 20.2% of patients. HLA-B27 was positive in 69.5% of the cases and family history of SpA was reported by 16.2% of the patients. The ungueal involvement occurred in 11.4% of the patients, which corresponds to 83% of the cases of PA (Table 3).

Due to the high frequency of patients with spondylitis, there was a high prevalence of axial involvement (36.7% in the Brazilian series); however, the mixed involvement (axial, peripheral and/or enthesitic) affected 47.9% of the Brazilian patients, emphasizing the importance of peripheral symptoms in the Brazilian series.

The mean BASFI value for Ibero-American population (excluding Peru, due to absence of data) was 3.50, whereas the mean BASDAI was 4.02. The mean visual analogue scale (VAS) global score of the disease analyzed by the physician was 2.97, whereas the mean VAS global score reported by the patient in the week before was 4.35. In Brazil, the mean BASFI value was 4.53; the mean BASDAI value was 4.12 and the VAS global score reported by the physician was 3.82, whereas the VAS global score reported by the patient in the week before was 4.68. (Table 4).

Table 3. Data obtained from patients with SpA from the RESPONDIA study and from Brazilian patients regarding low back pain as the initial symptom, peripheral joint involvement, enthesitis, positivity for HLA-B27, family history of SpA, ungueal involvement and uveitis

	Argentina	Chile	Spain	Mexico	Peru	Portugal	Uruguay	Venezuela	Costa Rica	Total Iberian countries	BRAZIL
Number of patients	405	109	2,367	172	60	101	53	69	33	3,369	1,036
HLA-B27 (%)	46%				31%	86%			57%	51.8%	69.5%
Family history of SpA (%)	15.3%	11.9%	16.7%	18.6%	18.3%	28.7%	13.2%	27.5%	12.1%	17.0%	16.2%
Initial sympt. peripheral a. (%)	66.0%	59.0%	29.6%	79.2%	43.3%	18.8%	42.0%	50.7%		37.7%	10.7%
Enthesitis (%)	32.8%	52.3%	9.4%	79.7%	8.3%	11.9%	52.8%	34.8%	57.6%	18.9%	24.7%
Low back pain (%)	54.0%	74.3%	56.8%	76.3%	48.3%	63.4%	58.5%	73.9%	81.8%	58.7%	65.5%
Ungueal involvement (%)	37.5%	8.3%	9.0%	0.6%	18.3%	2.0%	7.5%	17.4%	9.1%	12.1%	11.4%
Uveitis (%)	9.9%	19.3%	16.0%	18.6%	23.3%	33.7%	7.5%	20.3%	12.1%	16.1%	20.2%

SpA = spondyloarthritis; sympt. = symptoms; a = arthritis.

Table 4. Data obtained from patients with SpA from the RESPONDIA study, compared with the Brazilian values of BASDAI, BASFI, global VAS assessment of the disease by the physician and global VAS assessment of the disease by the patient

	Argentina	Chile	Spain	Mexico	Peru	Portugal	Uruguay	Venezuela	Costa Rica	Total Iberian countries	BRAZIL
BASDAI (mean)	3.97	4.9	4	4.5		4.2	5.3	4.43	4.61	4.02	4.12
BASFI (mean)	3.32	4.5	3.5	4		3.6	4.3	3.64	3.94	3.50	4.53
Global VAS patient (mean)	4.5	5.3	4.4	6.3			5.8	4.31	4.88	4.35	4.68
Global VAS physician (mean)	3.43	3.6	3	2.6			4.5	4.83	2.69	2.97	3.82

VAS = visual analogical scale.

Table 5. Data obtained from patients with SpA from the RESPONDIA study, compared with the Brazilian values regarding the use of drug therapy

	Argentina	Chile	Spain	Mexico	Peru	Portugal	Uruguay	Venezuela	Costa Rica	Total Iberian countries	BRASIL
NSAIDs (%)	77.5%	83.4%	73.0%	94.0%	0.0%	94.8%	98.0%	97.1%	97.0%	71.2%	77.0%
CS (%)	29.0%	40.3%	15.0%	11.0%	15.3%	29.0%	9.0%	46.4%	39.4%	18.5%	7.5%
SSZ (%)	12.0%	27.5%	15.0%	35.0%	56.7%	47.3%	28.0%	40.6%	45.5%	18.8%	21.3%
MTX (%)	49.0%	44.0%	17.0%	30.0%	23.3%	23.1%	36.0%	53.6%	33.3%	23.9%	26.2%
Biological agents (%)	10.4%	0.0%	0.0%	12.1%	1.7%	10.8%	0.0%	27.0%	12.1%	2.9%	5.4%

NSAIDs = non-steroidal anti-inflammatory drugs; CS = corticosteroids; SSZ = sulphasalazine; MTX = methotrexate.

The medications more often used in the Ibero-American countries were nonsteroidal anti-inflammatory drugs (NSAIDs) in 71.2% of the patients, followed by methotrexate (MTX) in 23.9%. There is no description of the use of NSAIDs in Peru, or reports on the use of immunobiological drugs in Chile and Uruguay. Regarding the drug treatment in Brazil, NSAIDs were used by 77% of the patients, followed by MTX in 26.2%, sulphasalazine (SSZ) in 21.3%, corticosteroids in 7.5% and anti-TNF biological agents in 5.4% (Table 5). The use of biological agents in the Brazilian series was lower than that observed in the literature, as these medications only started to be routinely used in patients with SpA in the final period of the RESPONDIA study.

Some data obtained through the RESPONDIA protocol, such as degree of schooling and occupation, BASMI,

BASRI, PCR, VHS, SF-12, ASQOL and Maastricht Ankylosing Spondylitis Enthesitis Score (MASES), were not reported by these articles and will be published subsequently.

In conclusion, the Brazilian series presented a high frequency of patients with a diagnosis of ankylosing spondylitis, responsible for the high number of individuals of the male sex and HLA-B27-positive. Regarding the treatment, the Brazilian patients received more NSAIDs and less steroids than the Ibero-American sample.

The RESPONDIA study represents the largest series of patients with a diagnosis of spondyloarthritis in the Americas, also including patients from Iberian countries (Spain and Portugal). The fact that a common protocol of investigation was used, which was extracted and validated from the Spanish

registry (REGISPONSER), is an extremely important factor. The Brazilian sample represented approximately ¼ of the group, being representative as it included patients from the five macro-regions of the country.

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