# Poorly and Well Controlled Spondyloarthropathies: A Comparison of 2 Groups of Patients

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*ABSTRACT.* ***Objective.*** To describe in a large population of patients with spondyloarthropathy (SpA) the proportion and characteristics of individuals whose disease was poorly controlled by their current treatment, compared to patients whose disease was well controlled.

***Methods.*** We conducted a survey among the members of Spondylis, one of the main not-for-profit SpA patient organizations in France. One thousand anonymous questionnaires were sent to patients throughout France. Among collected data were the opinions of patients about control of their symptoms as well as their past and current treatment.

***Results.*** Five hundred and seven respondents were included in the study of whom 75.9% were receiving nonsteroidal antiinflammatory drugs (NSAID), 55% reported inadequate control, and 45% good control of their nocturnal pain and morning stiffness. The Bath Ankylosing Spondylitis disease activity index (BASDAI) and functional index (BASFI) scores and the rates of occurrence of main symptoms were significantly higher in the group with poorly controlled disease. All drugs except NSAID were more often used currently and in the past by patients with poor disease control.

***Conclusion.*** Conventional treatments failed to provide adequate symptom relief in over half the patients with SpA, despite the use of various drugs in the vast majority of them. Although our results were obtained in a selected patient population, they suggest that a rather large proportion of SpA patients might be candidates for biotherapies. (J Rheumatol 2005;32:77–9)

*Key Indexing Terms:*
SPONDYLOARTHROPATHY ANKYLOSING SPONDYLITIS
CONVENTIONAL DRUGS PATIENT OPINION TREATMENT

The efficacy of nonsteroidal antiinflammatory drugs (NSAID) is well established in the treatment of the spondyloarthropathies (SpA); however, NSAID fail to provide adequate symptom control in some patients[1], produce unacceptable gastrointestinal or other side effects in others[2], and affect the quality of life of these patients[3]. For these patients, only sulfasalazine has been evaluated in randomized placebo-controlled trials, showing some degree of peripheral symptom relief[4-7]. Thus, conventional treatment options may be rapidly exhausted in patients with onset of SpA early in life, leaving tumor necrosis factor (TNF)-α inhibitors as the only hope for relief[8-11].

We studied a large population of patients with SpA in order to compare the characteristics of patients whose disease was poorly controlled by current treatment versus those whose disease was well controlled.

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## MATERIALS AND METHODS

*Study questionnaire.* We conducted a survey among the members of Spondylis, one of the main not-for-profit SpA patient organizations in France. In February 2002 (before access to anti-TNF treatments for SpA were available in France), the Spondylis board sent a questionnaire to 1000 patients (members and contacts) throughout the country. Patients were asked to complete the questionnaire anonymously and to return it within 4 weeks. Study physicians and Spondylis volunteers were available for answering any queries by telephone.

The questionnaire was drafted by study physicians and edited for clarity by the President of Spondylis. The questionnaire collected the main characteristics of patients and their disease. Confirmation of diagnosis by a rheumatologist was assessed by asking whether a rheumatologist had confirmed the diagnosis of the SpA subtype checked off by the patient in the response option list. Patients were also asked to give a subjective evaluation of disease control by their current treatment [Do you feel that your current treatment provides adequate relief of the pain (during the day and at night) and morning stiffness due to your disease?], to list their current symptoms, and to determine their disease activity index (using the Bath Ankylosing Spondylitis disease activity index, BASDAI) and functional index (BASFI), as explained by example. Finally, patients were asked to list drugs they had taken and drugs they were using at the time of the survey including dosage, duration of use, response, and reasons for discontinuation. In the last item, patients were asked to evaluate possible incomplete recall of NSAID use.

*Statistical analysis.* Respondents were divided into 2 groups based on whether they gave a yes or no answer to the item on adequacy of disease control. We compared these 2 groups with regard to the main collected data, using nonparametric tests (chi-square and Mann-Whitney). All tests were run on PCSM software (Deltasoft, Grenoble, France).

## RESULTS

*Patient questionnaires*. Of the 1000 mailed questionnaires, 600 were returned, 507 of them being completed adequately. The main demographic and clinical characteristics of these 507 patients are shown in Table 1. Combined followup by a general practitioner (GP) and an office-based rheumatologist was the most common situation (26.4%), followed by a followup by a GP alone (22.1%). Table 2 reports the treatments used, showing in particular that 75.9% of patients were receiving NSAID [celecoxib (17% of patients), diclofenac (12%), phenylbutazone (11%), indomethacin (10%), rofecoxib (9.5%), and ketoprofen (8%)]. Among the patients on NSAID therapy, 30% had dose-limiting side effects. Table 2 lists the main treatments taken in the past. Half the respondents believed they had forgotten to list one or more NSAID.

*Comparison of the patients*. Of the 507 patients, 277 (55%) reported inadequate control of their pain and morning stiffness. Table 3 compares disease activity variables in the 2 groups. As expected, these variables were higher or more frequent in the poorly controlled group, which had a larger proportion of women, an older mean age at symptom onset, and a longer time from symptom onset to diagnosis, without any other statistically significant differences between the groups (Table 1). Among drugs, only NSAID had similar rates of use in the 2 groups (Table 2). Salazopyrine, methotrexate (MTX), recent local glucocorticoid injections, oral glucocorticoid therapy, analgesics, and physiotherapy were currently being used, while sulfasalazine, oral glucocorticoids, and home exercises had previously been used, by a larger proportion of patients with poor disease control (Table 2). Forty percent of the patients with poorly controlled disease had used at least 2 NSAID and reported a BASDAI greater than 40 (vs 8% of patients in the other

*Table 1*. Main characteristics of the 507 patients with SpA included in the survey. Disease control was determined based upon effectiveness of current treatment. Statistical values were derived using the chi-square and Mann-Whitney tests; p values < 0.05 are considered significant.

| | Overall n = 507 | Good Disease Control n = 230 | Poor Disease Control n = 277 | p |
|---|---|---|---|---|
| Sex, n (%) | | | | |
| Male | 254 (50) | 134 (58) | 120 (43) | 0.0001 |
| Female | 253 (50) | 96 (42) | 157 (57) | |
| Mean age, yrs, ± SD | | | | |
| Study | 45 ± 13 | 43 ± 13 | 45 ± 13 | NS |
| SpA onset | 27 ± 10 | 27 ± 10 | 28 ± 10 | 0.02 |
| SpA diagnosis | 34 ± 11 | 32 ± 11 | 35 ± 11 | 0.006 |
| Hospitalization*, n (%) | 189 (37) | 82 (36) | 107 (39) | NS |
| HLA-B27 positive, n (%) | 395 (78) | 188 (82) | 207 (75) | NS |
| Psoriasis, n (%) | 110 (22) | 47 (20) | 63 (23) | NS |
| Uveitis, n (%) | 122 (24) | 61 (26) | 61 (22) | NS |
| Crohn's disease, n (%) | 41 (8) | 14 (6) | 27 (10) | NS |

* Prior hospitalizations for SpA. NS: not statistically significant.

*Table 2*. Rates of current and past treatment use in the overall survey population and in the groups with well-controlled and poorly controlled disease. Disease control was determined based upon current treatment. Data are presented as n (%).

| | Current Treatment | | | | Past Treatment | | | |
|---|---|---|---|---|---|---|---|---|
| | Overall n = 507 | Good Disease Control n = 230 | Poor Disease Control n = 277 | p | Overall n = 507 | Good Disease Control n = 230 | Poor Disease Control n = 277 | p |
| NSAID | 385 (75.9) | 167 (72.6) | 218 (78.7) | 0.11 | 202 (40) | 74 (32) | 128 (46) | 0.0001 |
| NSAID and SAARD | 86 (17) | 25 (10.9) | 61 (22.1) | 0.0001 | | | | |
| NSAID with no SAARD | 299 (59) | 142 (61.7) | 157 (56.7) | 0.21 | | | | |
| Analgesics | 239 (47.1) | 69 (30) | 170 (60.7) | 0.0001 | | | | |
| Salazopyrine | 84 (16.6) | 27 (11.7) | 57 (20.6) | 0.01 | 150 (30) | 57 (25) | 93 (34) | 0.03 |
| Methotrexate | 31 (6.1) | 8 (3.5) | 23 (8.3) | 0.03 | 36 (7) | 13 (6) | 23 (8) | 0.24 |
| Oral glucocorticoid therapy | 36 (7.1) | 8 (3.5) | 28 (10.1) | 0.003 | 194 (38) | 77 (33) | 117 (42) | 0.04 |
| Recent glucocorticoid bolus therapy* | 9 (1.8) | 3 (1.3) | 6 (2.2) | 0.46 | 42 (8) | 20 (9) | 22 (8) | 0.42 |
| Recent local glucocorticoid injection* | 56 (11) | 110 (4.3) | 46 (16.6) | 0.0001 | 245 (48) | 103 (45) | 142 (51) | 0.12 |
| Exercise at home | 224 (44.2) | 97 (42.2) | 127 (45.8) | 0.41 | 304 (60) | 136 (59) | 168 (61) | 0.03 |
| Physiotherapy | 234 (46) | 85 (37) | 149 (54) | 0.0001 | 441 (87) | 193 (90) | 248 (90) | 0.06 |

* Within the last 3 months. SAARD: slow acting antirheumatic drug.

*Table 3.* Current symptoms and disease activity indices in the patients with well-controlled and poorly controlled disease, based upon current treatment. Data are presented as n (%) or mean (± SD).

| | Overall n = 507 | Good Disease Control n = 230 | Poor Disease Control n = 277 | p |
|---|---|---|---|---|
| BASDAI | 40 ± 19.1 | 29.6 ± 19.2 | 54.2 ± 19.3 | 0.0001 |
| BASFI | 28 ± 20.2 | 18.8 ± 19.1 | 38.0 ± 23.1 | 0.0001 |
| Morning stiffness duration, min | 48.8 ± 47.5 | 37 ± 41 | 58 ± 50 | 0.0001 |
| Current axial symptoms | | | | |
| Thoracolumbar spine | 349 (68.8) | 109 (47.4) | 240 (86.6) | 0.0001 |
| Cervical spine | 238 (46.9) | 66 (28.7) | 172 (62.1) | 0.0001 |
| Sacroiliac joints | 192 (37.9) | 48 (20.9) | 144 (52) | 0.0001 |
| Current peripheral arthritis | 134 (26.4) | 39 (17.0) | 95 (34.3) | 0.0001 |
| Enthesopathy | | | | |
| Heel pain | 140 (27.6) | 36 (15.7) | 104 (37.5) | 0.0001 |

BASDAI: Bath ankylosing spondylitis disease activity index; BASFI: Bath ankylosing spondylitis functional index.

group); in all this group made up 26% of the whole population).

*Reasons for treatment discontinuation.* Inadequate symptom relief was the main reported reason for treatment discontinuation in all drug classes.

## DISCUSSION

The low rate of disease control (45%) as assessed subjectively by patients was corroborated by the finding that 53% had a BASDAI greater than 40 (data not shown). These poor outcomes were noted despite current use of NSAID by 79% of patients, in keeping with earlier studies in large patient populations[12], and past or current use of salazopyrine and/or MTX by 71% of patients. Thus, most of the patients with poor disease control probably received optimal treatment. In keeping with our findings, Ward, *et al* reported a poor 6-month continuation rate for a newly started NSAID (25% to 54%), as well as for salazopyrine and MTX (58% and 61%, respectively)[2].

That conventional treatments failed to provide adequate symptom relief in over half the patients with SpA belonging to a patient organization is the main finding from our study. Our recruitment method may have led to selection bias in favor of patients with poorly controlled disease since this type of patient may be more likely to join a patient organization.

An additional large-scale study among office-based rheumatologists would be useful for determining the extent to which our findings can be generalized to the entire spectrum of patients with SpA. It should be noted that 40% of the poorly controlled patients — 26% of the whole group — fulfilled the main requirements of the recent ASAS response criteria recommendations for the use of anti-TNF agents in AS[13]. Although our results were obtained in a selected patient population, they suggest that many patients with SpA may be candidates for biotherapies, should these be found safe for longterm use.

## REFERENCES


1. Amor B, Dougados M, Khan MA. Management of refractory ankylosing spondylitis and related spondyloarthropathies. Rheum Dis Clin North Am 1995;21:117-28.
2. Ward MM, Kuzis S. Medication toxicity among patients with ankylosing spondylitis. Arthritis Rheum 2002;15:234-41.
3. Ward MM. Health-related quality of life in ankylosing spondylitis: a survey of 175 patients. Arthritis Care Res 1999;12:247-55.
4. Dougados M, Maetzel A, Mijiyawa M, Amor B. Evaluation of sulphasalazine in the treatment of spondyloarthropathies. Ann Rheum Dis 1992;51:955-8.
5. Clegg DO, Reda DJ, Weisman MH, et al. Comparison of sulfasalazine and placebo in the treatment of ankylosing spondylitis. A Department of Veterans Affairs Cooperative Study. Arthritis Rheum 1996;39:2004-12.
6. Dougados M, van der Linden S, Leirisalo-Repo M, et al. Sulfasalazine in the treatment of spondylarthropathy. A randomized, multicenter, double-blind, placebo-controlled study. Arthritis Rheum 1995;38:618-27.
7. Clegg DO, Reda DJ, Abdellatif M. Comparison of sulfasalazine and placebo for the treatment of axial and peripheral articular manifestations of the seronegative spondylarthropathies: a Department of Veterans Affairs cooperative study. Arthritis Rheum 1999;42:2325-9.
8. Van Den Bosch F, Kruithof E, Baeten D, et al. Randomised double-blind comparison of chimeric monoclonal antibody to tumor necrosis factor alpha (infliximab) versus placebo in active spondylarthropathy. Arthritis Rheum 2002;46:755-65.
9. Braun J, Brandt J, Zink A, et al. Treatment of active ankylosing spondylitis with infliximab: a randomised controlled multicentre trial. Lancet 2002;359:1187-93.
10. Gorman J, Sack K, Davis JC. Treatment of ankylosing spondylitis by inhibition of tumor necrosis factor (alpha). N Engl J Med 2002;346:1349-56.
11. Mease PJ, Goffe BS, Metz J, Van der Stoep A, Finck B, Burge DJ. Etanercept in the treatment of psoriatic arthritis and psoriasis: a randomised trial. Lancet 2000;356:385-90.
12. Calin A, Elswood J. A prospective nationwide cross-sectional study of NSAID usage in 1331 patients with ankylosing spondylitis. J Rheumatol 1990;17:801-3.
13. Braun J, Pham T, Sieper J, et al. International ASAS consensus statement for the use of anti-tumour necrosis factor agents in patients with ankylosing spondylitis. Ann Rheum Dis 2003;62:817-24.