Small Bowel Inflammatory Involvement in Behçet’s Disease Associated Spondyloarthritis Is Different from Other Spondyloarthritides. A Prospective Cohort Study

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INTRODUCTION

Although at present no longer considered as part of the seronegative spondyloarthritides (SpAs), being classified as a vasculitis, Behçet’s disease still presents some similar clinical features with them. Among these, arthritis in Behçet’s disease is usually similar to the other SpAs, a nonerosive, asymmetric oligoarthritis, involving mainly the knees, elbow and radiocarpal joints [1]. Some studies report that approximately 10% of the patients with Behçet’s disease, particularly those HLA-B27 positive, present sacroiliitis [2]; another involvement common to the seronegative SpA and Behçet’s disease is the inflammatory damage to the structures of the eye (uveitis); similarities include also the fact that treatment with anti-TNF-alpha biologic agents represents a solution for amending certain inflammatory manifestations in Behçet’s disease [3], as well as in SpA [4]. These marked overlapping clinical features raise the question whether a subgroup of patients with Behçet’s disease could be considered as belonging to the larger family of seronegative SpAs. The already known inflammatory involvement at the level of the small bowel, especially the terminal ileum, in SpA patients could not be extrapolated for patients with Behçet’s disease associated SpA (BehSpA), therefore the present study aims to investigate and compare it in these diseases.

METHODS

The study is part of a single-center research aiming to investigate the bowel inflammatory involvement in SpAs,
registered on the Clinicaltrials.gov website with the number NCT00768950.

**Inclusion criteria**
From January 2008 till March 2012, consecutive patients referred for evaluation in the Internal Medicine or Rheumatology Departments having completed the Amor criteria for the definition of seronegative spondyloarthropathy (score ≥ 6) and with one of the following diagnoses included in the concept of SpA (ankylosing spondylitis -AS, reactive arthritis, psoriatic arthritis and spondylitis, undifferentiated SpA) or Behçet's disease, established after the completion of the diagnostic criteria for each of these diseases, were considered for enrollment into the study. In the case of Behçet's disease, the patients had to fulfill also the criteria of the International Study Group for Behçet's Disease [5].

**Exclusion criteria** were the following:
1. established diagnosis of inflammatory bowel disease before enrollment;
2. negative intestinal luminal patency test with the Agile capsule in the following situations: a) presence of symptoms suggestive of intestinal obstruction or stenosis; b) history of radiation therapy at the level of the abdomen or pelvis; c) history of major abdominal surgery;
3. presence of swallowing disorders;
4. presence of a cardiac pace-maker;
5. positive pregnancy test or known pregnancy in evolution;
6. significant co-morbidities, which, in the view of the researcher, would represent contraindications for a surgical intervention;
7. lack of discernment;
8. refusal to sign the informed consent.

The **control group** consisted of patients who had a videocapsule endoscopy (VCE) examination performed in the Gastroenterology Department during the course of the study, provided that they had not an articular inflammatory condition, nor an established diagnosis or suspicion of inflammatory bowel disease and that they had not taken anti-inflammatory drugs at the time of the bowel evaluation and also that the VCE examination that was performed evaluated the entirety of the small bowel. The subjects were sex and age-matched to those included in the study group.

**Study procedures**
The protocol was approved by the institutional Ethics Committee and all the patients agreed to participate in the study and signed the informed consent before enrolling. Complete blood count, fibrinogenemia, serum C reactive protein (CRP) and erythrocyte sedimentation rate (ESR) were determined in the study patients.

After performing the intestinal patency test with the Agile capsule, the patients were submitted to a VCE examination (PillCam SB, Given Imaging, Yokneam, Israel). The preparation for the procedure included a fasting period of 12 h and a routine PEG-based bowel preparation (Endofalk, Dr. Falk Pharma GmbH, Freiburg, Germany) with 2 L administered in the evening before and 1 L on the morning of the procedure. Simethicone 80 mg was given orally 15 to 20 minutes prior to the initiation of the VCE examination (Espumisan L emulsion, Berlin Chemie AG, Berlin, Germany). Patients were allowed to drink clear liquids 2 h after VCE ingestion and were free to engage in their normal daily activities. They were allowed to eat a light lunch 4 h after VCE ingestion and returned for removal of the recorder 8-9 h after ingestion. ileocolonoscopy was performed as part of a complete bowel evaluation only in those patients who specifically consented to it.

The RAPID™ versions that were used for reading the VCE recordings were 5.0 (initially), 6.0 (starting with December 2009) and 7.0 (from January 2011). Two endoscopists with experience in VCE examination thoroughly reviewed the findings of VCE. Then, after evaluation of the recorded images, one of the investigators (MR) computed the Lewis score, aided by the last versions of the software (Rapid ™ 6.0 and 7.0). The inflammation score was calculated separately for each of the tertiles of the small bowel (proximal, middle and distal), its overall value being obtained by adding to the highest of these three partial small bowel scores of inflammation, the stenosis score for the whole small bowel.

At the end of the study (March 2012), verification of the initial diagnosis, data on the clinical state of the patients and evolution of their articular or intestinal disease were obtained through a telephone interview with the treating doctor (rheumatologist or internal medicine specialist), or, when this was not possible, with the patient.

**Statistical analysis**
Collected data were recorded on a preformed questionnaire and introduced afterwards in the electronic database. Results are expressed as frequencies for categorical variables (further analyzed by Fisher’s exact test), mean and standard deviation for normal continuous variables (analyzed by Student’s t test), and median and extremes for non-normal continuous variables (analyzed by Mann-Whitney U test). Hypothesis testing was 2-tailed, with p < 0.05 considered statistically significant. The statistical analysis of the data was performed using the SPSS for Windows software (IBM Corp., Armonk, USA) – version 16.0.

**RESULTS**

**Characteristics of the study group**
There were 61 enrolled patients who underwent the study procedures: 29 (47.5%) females and 32 males, with a mean age of 38.4 ± 10.9 years. Among them, the established diagnosis was AS in 35 (57.4%), undifferentiated SpA (UnSpA) in 16 (26.2%), psoriatic SpA (PsSpA) in 3 (4.9%) (all of them representing the SpA group), and SpA associated with Behçet’s disease (BehSpA group) in 7 (11.5%).

Regarding age, there was a small difference between the SpA and the BehSpA groups (38.7 ± 10.9 vs. 35.8 ± 12.1 years, p = 0.47). The BehSpA group comprised 1 male and 6 (85.7%) females, statistically different rate from that of the SpA group (p = 0.046).

Twenty-nine (53.7%) of the 54 patients in the SpA group were treated with non-steroidal anti-inflammatory drugs (NSAIDs) at the time of the VCE examination vs. 4 (57.1 %) from the 7 patients in the BehSpA group (p = 0.86). From the 7 patients with Behçet’s disease, 5 (71.4%) were treated with an immunomodulatory or immunosuppresive drug
(a combination of methylprednisolone and sulphasalazine in one patient, azathioprine and prednisone in another, dexamethazone in the third case, sulphasalazine alone in the fourth and a combination of methylprednisolone, cyclophosphamide and methotrexate in the last one), vs. 39 patients (72.2%) in the SpA group (p = 0.96).

Symptoms suggestive of bowel involvement were present in 6 out of the 7 patients with BehSpA. They consisted of diarrhea, abdominal pain, mild anemia or a combination of them (Table I).

Table I. Symptoms that could suggest intestinal involvement in patients with Behçet’s disease enrolled in the present study; gender and age of the patients are also provided.

<table>
<thead>
<tr>
<th>Patient No.</th>
<th>Gender</th>
<th>Age (years)</th>
<th>Gastrointestinal Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Female</td>
<td>28</td>
<td>absent</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>29</td>
<td>diarrheal episodes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>diffuse intermittent abdominal pain</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mild sideropenic anemia</td>
</tr>
<tr>
<td>3</td>
<td>Female</td>
<td>50</td>
<td>mild sideropenic anemia</td>
</tr>
<tr>
<td>4</td>
<td>Female</td>
<td>38</td>
<td>diffuse persistent abdominal pain</td>
</tr>
<tr>
<td>5</td>
<td>Female</td>
<td>21</td>
<td>diarrheal episodes</td>
</tr>
<tr>
<td>6</td>
<td>Male</td>
<td>54</td>
<td>diarrheal episodes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>alternating with constipation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mild normocytic anemia</td>
</tr>
<tr>
<td>7</td>
<td>Female</td>
<td>29</td>
<td>persistent diarrhea</td>
</tr>
</tbody>
</table>

The control group

The control group was represented by 23 subjects without an ongoing condition that predisposed to intestinal inflammation: functional dyspepsia in 12, obscure gastrointestinal bleeding in 4 (in whom the diagnosis was not of inflammatory bowel disease), persistent halena in 1, postoperative evaluation (resected neuroendocrine ileal carcinoma) in 1, treated (and asymptomatic) celiac disease in 1, Peutz-Jeghers polypsis in 1, ileal polyp discovered by transabdominal ultrasound examination in 1 and multiple colonic polyps in another 2 subjects. This group had similar composition as regards gender (11 males and 12 females, p = 0.70) and age (42.9 ± 9.8 years, p = 0.10) with the study group.

The Amor score

Among the variables included in the calculation of the Amor score, the HLA-B27 status was available for 50 patients (81.9%) (43 in the SpA group and all 7 of the Behçet’s disease SpA group) (Table II). In the BehSpA group, only 2 (28.5%) were HLA-B27 positive (both with radiological sacroiliitis). And though the Amor score tended to be slightly higher in the SpA group (10.19 ± 2.74), the difference from the BehSpA group was not statistically significant (9.71 ± 2.98) (p = 0.63).

Still, due to the missing HLA-B27 status in 11 patients in the SpA group, the Amor score could have been higher in these patients; even so, if all the missing values were positive, the difference would not reach statistical significance (10.63 ± 2.77 vs. 9.71 ± 2.98) (p = 0.43).

The VCE examination

All the enrolled patients were evaluated using VCE. From the 61 patients in the study group, in 4 (6.5%) the videocapsule did not reach the ileocecal valve, thus did not examine the entirety of the small intestine. No adverse events were reported and at the end all the capsules were naturally excreted.

Table II. The components of the Amor score in the patients comprising the Behçet’s disease associated spondyloarthritis (BehSpA) group (‘x’: present, ‘-’: absent )

<table>
<thead>
<tr>
<th>Parameters of the Amor score</th>
<th>BehSpA Patient No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Clinical symptoms or past history of</td>
<td>x x - x x x -</td>
</tr>
<tr>
<td>Lumbar or dorsal pain at night, or lumbar or dorsal morning stiffness</td>
<td></td>
</tr>
<tr>
<td>Asymmetrical oligoarthritis</td>
<td>- x - - - x x</td>
</tr>
<tr>
<td>Buttock pain (alternating or not)</td>
<td>- x x x - x x</td>
</tr>
<tr>
<td>Sausage-like finger or toe</td>
<td>- - - - x - -</td>
</tr>
<tr>
<td>Heel pain</td>
<td>- x x x x x x</td>
</tr>
<tr>
<td>Iritis</td>
<td>- x - x - - x</td>
</tr>
<tr>
<td>Non-gonococcal urethritis or cervicitis accompanying, or within 1 month before the onset of arthritis</td>
<td>- x - - - - -</td>
</tr>
<tr>
<td>Acute diarrhoea accompanying, or within 1 month before the onset of arthritis</td>
<td>- x - - - - -</td>
</tr>
<tr>
<td>Presence of history of psoriasis and/or balanitis and/or of inflammatory bowel disease (ulcerative colitis, Crohn’s disease)</td>
<td>x - - - - - -</td>
</tr>
<tr>
<td>Radiological findings</td>
<td>x - x x x x -</td>
</tr>
<tr>
<td>Sacroilitis (grade &gt; 2 if bilateral, grade &gt; 3 if unilateral)</td>
<td></td>
</tr>
<tr>
<td>Genetic background</td>
<td>- - - x x x</td>
</tr>
<tr>
<td>Presence of HLA-B27 and/or family history of ankylosing spondylitis, reactive arthritis, uveitis, psoriasis or chronic inflammatory bowel disease</td>
<td></td>
</tr>
<tr>
<td>Response to therapy</td>
<td>- x - - - x -</td>
</tr>
<tr>
<td>Definite improvement of musculoskeletal complaints with NSAIDs in less than 48 h or relapse of the pain in less than 48 h if NSAIDs discontinued</td>
<td></td>
</tr>
</tbody>
</table>

The Amor score 6 12 7 12 8 14 9
The Lewis score

For the whole small bowel, the total Lewis score (depicting the mucosal inflammatory changes of the small bowel) [6] could be estimated in 59 patients (96.7%). Three patients had single small bowel stenoses (none of them with the diagnosis of Behçet’s disease), all being passed through by the videocapsule during its recording time.

In the BehSpA group, 5 of the 7 patients (71.4%) had an abnormal Lewis score; the small bowel lesions consisted of a few patchy ulcerations and areas of mucosal erythema that were located in 1 patient uniformly throughout the entire small bowel, in another patient in the proximal half of the small bowel, and in the other 3 patients predominantly in the distal small intestinal tertile (Fig. 1).

As expected, the score of small bowel mucosal inflammatory change (Lewis) varied between the disease entities that were considered for analysis (Behçet’s disease associated SpA, vs. the other SpA, vs. the controls) (Table III), the differences being statistically significant (Fig. 2).

Ileoscopy

Ileoscopy was performed in 5 of the 7 patients from the BehSpA group, revealing macroscopic signs of ileal inflammation in only 1 patient. The other 4 examinations were normal.

**Table III.** The characteristics of the Lewis score in Behçet’s disease associated spondyloarthritis (BehSpA) vs. the other spondyloarthritides (SpA) and the control group. The median of values was used for the statistical analysis of the data (nonparametric tests).

<table>
<thead>
<tr>
<th>Characteristics of the Lewis score</th>
<th>BehSpA group</th>
<th>The SpA group</th>
<th>The control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>179</td>
<td>439.8</td>
<td>81</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>128.5</td>
<td>396.7</td>
<td>121.3</td>
</tr>
<tr>
<td>Median</td>
<td>225</td>
<td>337</td>
<td>0</td>
</tr>
<tr>
<td>Minimum</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Maximum</td>
<td>337</td>
<td>1630</td>
<td>505</td>
</tr>
</tbody>
</table>

Serum inflammatory markers

The level of the serum CRP (but not that of the ESR or fibrinogenemia) differed between the BehSpA and the other SpA groups, being markedly reduced in the former (mean of 2.08±2.66 vs. 14.02±20.17, p = 0.053) (Fig. 3).

**DISCUSSION**

Behçet’s disease – a vasculitis involving multiple organs – was first described in 1937 [7]. Its main clinical manifestations

![Fig. 1. Small bowel inflammatory lesions in patients with Behçet’s disease associated spondyloarthritis (BehSpA) observed on VCE examination: a) proximal tertile ulcer (encircled); b) erosion located in the jejunum (encircled); c) small linear ulceration in the mid tertile (arrow); d) area of cobblestoning including a few ulcerative lesions (arrows) in the terminal ileum.](image-url)
well-controlled studies are difficult to conduct given the
not performed in a systematic manner, partly because
assessment of the entirety of the small intestine was
has arisen.
whether this also applies for this subgroup of Behçet’s disease
involvement (macroscopic and microscopic) at the level of
And considering the already known prominent inflammatory
entity that was not presented before in the scientific literature.
more identifies a selected Behçet’s disease population that we
not have to be fulfilled for the diagnosis, and its value of 6 or
lesions, or positive pathergy test [5]. Amor score does
neurovascular system, and gastrointestinal tract [8]. According to the International Study Group Criteria
for Behçet’s disease, the diagnosis of Behçet’s disease requires
the presence of recurrent oral ulcers and at least two of the
following features: genital ulcers, typical eye lesions, typical
skin lesions, or positive pathergy test [5]. Amor score does
not have to be fulfilled for the diagnosis, and its value of 6 or
more identifies a selected Behçet’s disease population that we
named Behçet’s disease associated spondyloarthritides (BehSpA),
etity that was not presented before in the scientific literature.
and considering the already known prominent inflammatory
involvement (macroscopic and microscopic) at the level of
the small bowel mucosa in SpA patients [9], the question of
whether this also applies for this subgroup of BehSpA patients
has arisen.
In the patients with Behçet’s disease, an endoscopic
assessment of the entirety of the small intestine was
not performed in a systematic manner, partly because
well-controlled studies are difficult to conduct given the
heterogeneity of the disease and its unpredictable course with
exacerbations and remissions [10]. Most of the data in the
literature come from the examination of the terminal ileum and
colon. Regarding the intestinal involvement in Behçet’s disease,
there are some facts that are already known: 10% to 25% of
these patients develop gastrointestinal (GI) manifestations,
the symptoms consisting mainly of abdominal pain, diarrhoea
and acute or chronic GI bleeding [11]. Intestinal lesions may
be present in both symptomatic and asymptomatic patients,
and do not show a specific endoscopic pattern [11]. Mucosal
ulceration is most commonly seen in the ileocecal region
[10], found in 88% patients in one study [12], followed by
involvement of other parts of the colon, but rarely in the rectum
or anus. The characteristics of ileocecal ulcers have been shown
to vary in different regions, with multiple superficial ulcers
localized prominently in the terminal ileum in the Middle
East [13], and single deep ulcers with distinct borders in the
Far East [7]. The ulcers may be aphthous or, alternatively, deep
and round with punched-out appearance, longitudinal ulcers
are rare [10], and though the lesions may resolve with medical
therapy, they tend to recur later during the course of the disease
[14]. In one case report, the ulcers in the terminal ileum were
resistant to the combination therapy with sulphasalazine and
prednisone [15].
In patients with Behçet’s disease, VCE may assist in the
identification of the small bowel lesions [16]. There were
small series of Behçet’s disease patients in whom VCE was
performed; it may show erosions and aphthous ulcers in the
small bowel, identified in one study in 10 of the 11 patients
investigated for gastrointestinal symptoms [16]. Small (<0.5
cm) superficial ‘punched’ ulcers seem to be the main type of
lesion; they are located throughout the small bowel, not
only at the level of the distal ileum [16, 17], and in the same
study ileocolonoscopy identified abnormalities in only 2 of
the 10 patients [16]. As a matter of fact, due to the advent of
VCE, this intestinal involvement, namely the mucosal form of
Behçet’s disease, is at present considered to be different from
what was known before (i.e. the small bowel proximal to the
terminal ileum to be spared in all cases) [7], when only small
bowel follow-through, enteroclysis and post-surgical resection
studies were available.
In the present study, the intestinal inflammatory
involvement (present in 5 out of the 7 patients) was located in
one patient uniformly throughout the entire small bowel, in
another patient in the proximal half of the small bowel, and in
the other 3 patients predominantly in the distal small intestinal
terite. This is different from a recent study in which 10 patients
with Behçet’s disease and abdominal complaints were all found
to have small bowel inflammatory lesions, with predominant
involvement of the jejunum in 8 [18].
It should be stressed that a VCE finding of inflammatory
and ulcerative lesions frequently raises the problem of differential
diagnosis. Crohn’s disease, tuberculosis, cytomegalovirus
infection, vasculitis, ischaemia and ingestion of NSAIDs are,
besides Behçet’s disease, some of the causes of ulcerating lesions
in the small bowel, with differentiation impossible based on
endoscopic images alone [19]. The present recommendations
are to obtain histological confirmation of such lesions [20],
whenever possible, even if its diagnostic yield is very poor,
securing the diagnosis in only a minority of cases (18% in one study) [21].

Concerning the SpAs, it was not until the 1980s when Mielants and colleagues, assessing endoscopically the ileum of these patients, discovered macroscopic lesions (erythema, oedema, ulcers, a granular or „cobblestone” appearance of the intestinal mucosa) in approximately 30% of the cases [9]. In the diseases related to the concept of SpA, the VCE examination of the small bowel was conducted in a single relatively recent study, which included patients with peripheral arthritis or sacroilitis (not being strictly defined as SpA) who had not taken NSAIDs two months before the examination. Lesions (erythema, erosions, linear or aphthoid ulcers) were observed at the level of the whole small bowel mucosa in one-third of them, similar to those detected in Crohn’s disease, that they were classified as diagnostic in 20% and suggestive in 10% of the cases [22]. In our study, from the 59 patients in whom the Lewis score could be computed, 50 (84.7%) presented inflammatory changes at the level of the small intestine (Lewis score > 135). And as the range of the Lewis score is between 0 and 7840, these changes were considered as mild (score ≤ 790) in 43 (72.3%) and moderate-severe (score > 790) in 7 patients (11.8%). The difference is significant from the previous studies, where only 30-45% of cases had macroscopic lesions at the level of the small bowel [9, 22]; the explanation most probably resides in the fact that in the initial studies it was only the terminal ileum that was endoscopically evaluated, and in the only study involving the examination with the VCE, NSAID consumption was an exclusion criteria and it was uncertain if the patients did indeed belong to the SpA family.

As a matter of fact, using the Capsule Endoscopy Crohn’s Disease Activity Index [23] (CECDAI), a score that was specially designed to evaluate a disease with a more severe inflammatory involvement of the small bowel mucosa than that encountered in SpA, might have not served the purpose of the study. Supporting this idea is the finding that the Lewis score performs better than CECDAI in the evaluation of modest small bowel inflammatory involvement, defined by the fecal calprotectin values below 100 µg/g [24].

Regarding the subgroup of BehSpA (patients who concomitantly fulfilled the diagnostic criteria for both Behçet’s disease and SpA), the present study is to our knowledge the first aiming to quantitatively assess their intestinal inflammatory involvement and to compare it with the rest of the SpAs. Besides confirming the small bowel inflammatory involvement – present in a distribution and with an extent that are similar to the other studies, we found that these patients had significantly less pronounced intestinal inflammatory involvement when compared to the rest of the SpAs. This finding is very important, as some [25] suggested that Behçet’s disease could be one of the entities included in the concept of SpA, relying upon the following: negativity for rheumatoid factors, absence of rheumatoid nodules, peripheral articular involvement, radiological evidence of sacroilitis, overlapping in the clinical manifestations between the members of the group and the tendency of familial aggregation. Supporting the same hypothesis, other studies report that approximately 20% of the Behçet’s disease patients have CT anomalies at the level of the sacroiliac joints [26], there are rare instances of associations between Behçet’s disease and AS, and some patients with Behçet’s disease fulfill the diagnostic criteria for SpA [27-29]. The last thing is however problematic, since the fullness of the Amor criteria has only 85% sensitivity (and 90% specificity) for diagnosing SpA [30]. Moreover, in a recent study strictly questioning this issue, it was found that the sacroilitis and enthesis are found in a much smaller percentage of patients suffering from Behçet’s disease than in those with SpA (58.9 and 50%, vs. 3.4 and 10.3%, respectively), involvement was also different from the group of the SpA (involvement also of the posterior ocular structures or the sclera in Behçet’s disease), and HLA-B27 was negative for all of the 49 patients with Behçet’s disease included in the study [31]. Thus, there obviously seems that a significant difference between the Behçet’s disease and the SpAs exists.

The problem is represented by the patients who at the same time meet the diagnostic criteria for Behçet’s disease and for SpA. The presence, even in these patients, of a significant difference in intestinal inflammatory involvement from the other SpAs, as well as significantly lower levels of the serum CRP, as revealed by the present study, clearly draw a line between the two disease entities (SpA and BehSpA), suggesting once again, even for this phenotype of Behçet’s disease, that it is distinct from the SpA family. Since 4 of the 7 patients with Behçet’s disease were treated with NSAIDs, the differences in inflammatory bowel involvement from the controls must be interpreted with caution, because up to two thirds of the NSAID users are reported to exhibit small bowel lesions [32].

The main limitation of our study consisted of the small number of BehSpA patients enrolled. Besides that, only one endoscopist reviewed the VCE studies and computed the Lewis score, in a non-blinded fashion; and although its intraobserver reproducibility was very good (coefficient of variation assessed in 20 patients reached 3.52%) [33], this is definitely a limitation, and another independent expert group might be necessary for a more accurate validation of the endoscopic impressions.

CONCLUSION

The presence in BehSpA of a significant difference in intestinal inflammatory involvement from the other SpAs, as well as the significantly lower serum levels of CRP, as revealed by the present study, clearly draw a line between the two disease entities. Further prospective studies are still required to establish the proper use of the VCE examination and to provide a better understanding of the small bowel inflammatory involvement in patients with Behçet’s disease and its variant phenotypes.

Conflicts of interest: None to declare.

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