Brief Report

Mutilating/Resorptive Arthritis. A Study of 24 Patients in a Series of 360 Patients With Psoriatic Arthritis

Jesús Rodríguez-Moreno, a,* Maria Bonet, b Jordi Del Blanco-Barnusell, c Carmen Castaño, d Teresa Clavaguera, e Lourdes Mateo-Soria, f Daniel Roig-Vilaseca, g Jose M. Ruiz-Martin h

a Servicio de Reumatología, Hospital Universitario de Bellvitge, L’Hospitalet de Llobregat, Barcelona, Spain
b Unidad de Reumatología, Hospital Comarcal de l’Alt Penedès, Vilafranca del Penedès, Barcelona, Spain
c Unidad de Reumatología, Hospital Sant Jaume de Calella, Calella de Mar, Barcelona, Spain
d Unidad de Reumatología, Hospital Municipal de Badalona, Badalona, Barcelona, Spain
e Unidad de Reumatología, Hospital de Palamós, Palamós, Girona, Spain
f Servicio de Reumatología, Hospital Universitari Germans Trias i Pujol, Barcelona, Spain
g Unidad de Reumatología, CAE Cornellà, Cornellà de Llobregat, Barcelona, Spain
h Unidad de Reumatología, Hospital de Viladecans, Viladecans, Barcelona, Spain

ARTICLE INFO

Article history:
Received 18 June 2012
Accepted 27 June 2012
Available online 31 January 2013

Keywords:
Psoriatic arthritis
Arthritis mutilating
Resorptive arthropathy

ABSTRACT

Objective: To describe a large series of patients with mutilans/resorptive arthritis (AM) of a representative population of patients with psoriatic arthritis (PsA) and analyze the associated variables.

Methods: Multicenter cross-sectional study of consecutive patients affected by PsA in 8 centers. In patients with swelling or deformity of the hands or feet we performed an anteroposterior x-ray. The patient was affected by AM if erosive disorder affecting both articular surfaces completely was present.

Results: Of the 360 patients studied, 24 had PsA and AM (6.7%). The duration of their disease was significantly higher, and they exhibited a worse functional capacity as well as more DIP joint affection (p < .05). 30% had radiological changes indistinguishable from nodular osteoarthritis.

Conclusions: AM in PsA is associated with a worse functional capacity. Its possible association with nodular hand osteoarthritis deserves further study.

© 2012 Elsevier España, S.L. All rights reserved.

Artritis mutilante/resortiva. Estudio de 24 pacientes de una serie de 360 artritis psoriásicas

RESUMEN

Objetivo: Describir una serie amplia de pacientes con artritis mutilante/resortiva (AM) de una población representativa de pacientes con artritis psoriásica (APs) y analizar las variables asociadas.

Métodos: Estudio transversal multicéntrico que incluyó de forma consecutiva a los pacientes afectados de APs de 8 centros. A aquellos pacientes con tumefacción o deformidad de manos o pies sospechosa de se les realizó una radiografía antero-posterior. Se consideró que el paciente estaba afectado de AM si presentaba un trastorno erosivo que afectaba totalmente ambas superficies articulares.

Resultados: De los 360 pacientes con APs estudiados, 24 presentaban AM (6.7%). La duración de la enfermedad fue significativamente mayor y presentaban una peor capacidad funcional, así como una mayor afección de IFD (p < 0.05). En un 30% se detectaron cambios radiológicos indistinguibles de una osteoartritis nodular.

Conclusions: La AM en las APs se asocia a una peor capacidad funcional. Su posible asociación con la osteoartritis nodular de manos merece más estudios.

© 2012 Elsevier España, S.L. Todos los derechos reservados.

* Corresponding author.
E-mail address: jesus.rodriguez@bellvitgehospital.cat (J. Rodríguez-Moreno).

2173-5743/5 – see front matter © 2012 Elsevier España, S.L. All rights reserved.
### Introduction

In the first descriptions of psoriatic arthritis (PsA), Wright described a subtype of patients who had involvement of the distal interphalangeal joints with erosion and resorption of the joint ends and a characteristic shortening of the fingers that he called mutilating arthritis (MA). Apart from the first PsA series published by Wright, several studies have mentioned these mutilating forms. In the largest series of PsA published to date, the prevalence varies enormously, ranging between 2% and 23%.

There is some confusion in the terminology used (“opera-glass hand syndrome,” “main in lorgnette,” “arthritis mutilans” or “resorptive arthropathy”).

The objective of this study was to describe the frequency of MA and study its relationship with other variants of PsA.

### Patients and Methods

This was an observational, cross-sectional multicenter PsA study performed in 8 rheumatology centers. All patients met CASPAR criteria. The recorded variables are shown in Table 1. We performed an anteroposterior X-ray of the hands and feet in those patients with clinical deformity indicative of MA (shortened fingers) or clinical signs of inflammatory activity in these locations. The patient was considered as having resorptive arthropathy if hands and feet radiographs showed at least one joint with both bone ends shortened without osteophytes.

### Statistics

We used the chi-square or Fisher’s exact test for categorical variables. For quantitative variables we used and Student t and Mann–Whitney nonparametric tests.

We performed a multivariate logistic regression analysis by the “forward stepwise” method, which showed a tight association of the duration of arthritis, and distal interphalangeal and mHAQ condition variables.

### Results

Twenty-four patients (6.7%) were diagnosed with MA. The description of the patients is shown in Table 2. The analysis of the different variables in the subgroup of patients with bone resorption and the rest of the patients in the PsA series are shown in Table 1. The duration of arthritis was significantly greater (p < 0.05) in patients with bone resorption. The distal interphalangeal involvement was significantly more common in patients with resorptive changes (p = 0.00).

Functional capacity was worse in this subset of patients, both in the case of that perceived by the physician as well as that according to the ACR scale (p < 0.05) and self-perceived by the patient in the self-administered mHAQ questionnaire (p < 0.001). We observed a higher concentration of MA in tertiary health centers (p = 0.015).

Multivariate analysis showed an association between independent variables of duration of arthritis, distal interphalangeal condition and mHAQ with regard to the dependent variable (presence or absence of MA).

### Discussion

The term “arthritis mutilans” generally refers to severe deformities and recalls the “opera glass syndrome” appearance of multiple shortened fingers. But sometimes the resorptive process is not as marked as we have shown in this study, because one third of our patients had less than 3 affected fingers. When the process is limited to the feet it may go unnoticed and 20% in our series had a resorption process limited to the feet. For this reason, we believe that the term “resorptive arthropathy”, based on the X-ray image and coined by Swezy et al., better reflects the nature of the process. The “opera glass hand” deformity would be the final stage for some patients where juxtaarticular bone resorption is more severe.

The exact prevalence of MA/resorptive arthropathy in PsA shows very different results that we believe are due to the very heterogeneous definitions used in published series. Our prevalence is slightly higher than other series (6.7%) because we believe that we have included milder forms manifested only in X-rays. When only considering the “opera glass syndrome”, the prevalence in our series is 1.94% and if we take into consideration only those patients who are clinically shown to have shortening of any finger, the frequency of hand or foot affection is 4.4%. When compared with larger and recent ones, which use expert opinion consensus or the CASPAR definition of ‘arthritis mutilans’, prevalence is 3.7%.

Most of the joint pattern involved is polyarticular and symmetrical, as we and other authors have shown. We have to note that 12.5% of our patients with MA/resorptive arthropathy have an oligoarticular form.
Table 2
Description of 24 Patients Affected With Arthritis Mutilans/Resorptive Arthropathy.

<table>
<thead>
<tr>
<th>Patient</th>
<th>Sex</th>
<th>Age</th>
<th>Age at Onset of Psoriasis</th>
<th>Duration Psoriasis</th>
<th>Age at Onset of Arthritis</th>
<th>Duration Arthritis</th>
<th>Pattern of Peripheral Arthritis</th>
<th>Resorption &lt; 3 Digits</th>
<th>Single Resorption</th>
<th>&quot;Opera glass hand&quot;</th>
<th>X-ray Signs of Nodular OA</th>
<th>Distal Interphalangeal Affection</th>
<th>Axial Affection</th>
<th>HLA B27</th>
<th>Steroids</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBM</td>
<td>Male</td>
<td>52</td>
<td>17</td>
<td>29</td>
<td>23</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>JCV</td>
<td>Male</td>
<td>30</td>
<td>10</td>
<td>20</td>
<td>13</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>JCT</td>
<td>Male</td>
<td>54</td>
<td>29</td>
<td>25</td>
<td>41</td>
<td>Oligoart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>MPP</td>
<td>Female</td>
<td>51</td>
<td>14</td>
<td>37</td>
<td>28</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>?</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>CCF</td>
<td>Female</td>
<td>45</td>
<td>24</td>
<td>21</td>
<td>27</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>EGC</td>
<td>Female</td>
<td>48</td>
<td>14</td>
<td>34</td>
<td>28</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>MTR</td>
<td>Female</td>
<td>65</td>
<td>50</td>
<td>15</td>
<td>49</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>RRT</td>
<td>Female</td>
<td>71</td>
<td>47</td>
<td>24</td>
<td>46</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>PRM</td>
<td>Male</td>
<td>63</td>
<td>51</td>
<td>12</td>
<td>48</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>AGC</td>
<td>Female</td>
<td>64</td>
<td>25</td>
<td>39</td>
<td>48</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>PLM</td>
<td>Female</td>
<td>49</td>
<td>35</td>
<td>14</td>
<td>35</td>
<td>Oligoart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>DPO</td>
<td>Female</td>
<td>77</td>
<td>33</td>
<td>44</td>
<td>63</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>RRS</td>
<td>Female</td>
<td>45</td>
<td>20</td>
<td>25</td>
<td>22</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>JMR</td>
<td>Male</td>
<td>47</td>
<td>35</td>
<td>12</td>
<td>33</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>RBQ</td>
<td>Male</td>
<td>75</td>
<td>41</td>
<td>34</td>
<td>46</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>AVR</td>
<td>Male</td>
<td>65</td>
<td>52</td>
<td>13</td>
<td>58</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>MCB</td>
<td>Female</td>
<td>45</td>
<td>31</td>
<td>14</td>
<td>33</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>ARM</td>
<td>Male</td>
<td>65</td>
<td>64</td>
<td>1</td>
<td>58</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>FCA</td>
<td>Female</td>
<td>56</td>
<td>36</td>
<td>24</td>
<td>39</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>ABP</td>
<td>Female</td>
<td>53</td>
<td>44</td>
<td>9</td>
<td>27</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>JAGF</td>
<td>Male</td>
<td>46</td>
<td>40</td>
<td>6</td>
<td>40</td>
<td>Oligoart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>CLS</td>
<td>Male</td>
<td>60</td>
<td>50</td>
<td>10</td>
<td>56</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>AHC</td>
<td>Male</td>
<td>46</td>
<td>40</td>
<td>6</td>
<td>39</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>ARA</td>
<td>Female</td>
<td>80</td>
<td>54</td>
<td>26</td>
<td>29</td>
<td>Polyart</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
</tbody>
</table>

OA: nodular osteoarthritis; Oligoart: oligoarticular; Polyart: Polyarticular.
We also observed an association with a longer duration of arthritis, distal interphalangeal involvement and a worse functional capacity measured by the HAQ score and ACR functional scale. CASPAR study data also show an association with increased duration of arthritis, but instead do not show a worse functional capacity according to the HAQ score. The fact that it is associated with a longer duration of arthritis can lead one to believe that MA/resorptive arthropathy is a consequence of the inflammatory process in time longer.

One of the incidental findings that was striking in our study is the high frequency (30%) of the association findings of MA and nodular osteoarthritis. The prevalence of nodular osteoarthritis in normal population over 40 years is less than 8.5%. We have not found any publication describing this association.

Ethical Aspects

Protection of Persons and Animals. The authors declare that the procedures performed conformed to the ethical rules of the human experimentation committee and were in accordance with the World Medical Association and the Helsinki declaration.

Data Confidentiality. The authors declare that all protocols for publication of patient data in their center were followed and all patients included in the study received sufficient information and gave their informed consent in writing in order to participate in the study.

Right to Privacy and Informed Consent. The authors obtained informed consent of the patients and/or subjects referred to in the article. This corresponding author is in possession of this document.

Conflict of Interest

The authors have no conflict of interest to make.

References