7.85% and 0.61%, respectively [7]. Endothelin-1 (ET-1) showed a key role in the pathogenesis of SSc-associated DUs, digital microvascular damage and PAH. Plasma ET-1 concentrations are increased early in patients with SSc. Previous double-blind, randomized, placebo-controlled trials demonstrated that Bosentan, an oral ET receptor antagonist, reduces the occurrence of new DU [2]. In addition, Bosentan improved skin perfusion in SSc patients with PAH, although it did not ameliorate symptoms of RP [8].

Since SSc-PAH is a vascular disease, we can suppose that an early start of Bosentan therapy can reduce the progression of pulmonary vascular impairment. Therefore large randomized controlled trials are needed to confirm our preliminary data.

Rheumatology key message

- Systolic pulmonary arterial pressure did not increase in SSc patients who underwent Bosentan therapy for digital ulcer prophylaxis.

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Antonella Romaniello1, Giovanna Viola1, Felice Salsano2 and Edoardo Rosato2

1Cardiology Unit, Department of Clinical and Molecular Medicine, Sapienza University of Rome and 2Department of Clinical Medicine, Clinical Immunology Unit–Scleroderma Center, Rome, Italy.

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Correspondence to: Edoardo Rosato, Sapienza Department of Clinical Medicine, Clinical Immunology Unit, University of Rome, Viale dell’Università 37, 00185 Rome, Italy.
E-mail: edoardo.rosato@uniroma1.it

References


Prevalence of rheumatoid arthritis in an urban population of Algeria: a prospective study

Sir, RA is the most common chronic inflammatory disease worldwide and is an important health concern. Recent studies show a prevalence of ~0.5% in adults in Western countries [1]. However, there have been no published reports to estimate the prevalence of RA in Algeria or the other countries of North Africa, which have a Caucasian population of ~170 million people, with the exception of an unpublished thesis from Egypt (J. Abdel-Wahab, Minia University, Minya, Egypt).

The aim of this study was to calculate the prevalence of RA in the urban district of Barika, Algeria, and to estimate the prevalence of RA for the entire population of Algeria. The Barika district was chosen as an optimal site for investigating the prevalence of RA because of its widespread health insurance coverage (85% of the local population) and the presence of a rheumatology unit.

A prospective, population-based survey was conducted that included 125 253 people from the urban area of Barika, of which 52 504 were adults (26 358 males, 26 146 females). Orthopaedists and general practitioners working in the local area were asked to take part in the study by referring all patients who presented with potential signs of RA (those taking DMARDs, those on long-term glucocorticoids or those diagnosed with arthritis) to the only rheumatologist in the district (S.S., one of the authors) for further evaluation. The diagnosis of RA was either confirmed or rejected and laboratory tests were carried out. Patients already being treated for RA at the local rheumatology unit were also included in the study.

The rheumatologist applied the 1987 ACR criteria (positive if ≥4 points) when assessing patients for the diagnosis of RA. In cases with a confirmed diagnosis of RA, demographic, physical, laboratory and imaging data were collected and the main residence of the patient was confirmed and recorded. Data were collected using
Prevalence of RA in Africa

<table>
<thead>
<tr>
<th>Reference</th>
<th>Origin</th>
<th>Male, %</th>
<th>Female, %</th>
<th>Total, %</th>
<th>Age cut-off, years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brighton et al. [3]</td>
<td>South Africa</td>
<td>—</td>
<td>—</td>
<td>0.0026</td>
<td>All</td>
</tr>
<tr>
<td>Solomon et al. [4]</td>
<td>South Africa</td>
<td>0.4</td>
<td>1.4</td>
<td>0.9</td>
<td>≥15</td>
</tr>
<tr>
<td>Moolenburgh et al. [5]</td>
<td>Lesotho</td>
<td>—</td>
<td>—</td>
<td>0.3</td>
<td>≥15</td>
</tr>
<tr>
<td>Silman et al. [6]</td>
<td>Nigeria</td>
<td>—</td>
<td>—</td>
<td>&lt;0.05</td>
<td>All</td>
</tr>
<tr>
<td>Abdel-Wahab⁸</td>
<td>Algeria</td>
<td>0.02</td>
<td>0.25</td>
<td>0.13</td>
<td>≥18</td>
</tr>
<tr>
<td>Malemba et al. [7]</td>
<td>Dem Rep Congo</td>
<td>0.3</td>
<td>1.4</td>
<td>0.9</td>
<td>≥18</td>
</tr>
</tbody>
</table>

⁸J. Abdel-Wahab, Minia University, Minya, Egypt, unpublished thesis.

a standardized questionnaire. The study was carried out between April and December 2010 and was conducted according to the Declaration of Helsinki. Informed consent was obtained from all study participants. The study was approved by the committee of the Public General Hospital of Barika.

The prevalence of RA was calculated by dividing the reported number of cases in the study by the adult population of the district in 2010 (available from the Algerian Office National des Statistiques [2]). The national prevalence of RA was estimated using the population of Algeria [2], with adjustments for age and sex.

Descriptive data are expressed as mean (s.d.). Prevalence estimations are expressed with a 95% CI using the Wilson procedure with a correction for continuity. A comparison of the prevalence in men and women was performed using a z² test; the level of significance was set at 0.05.

During the inclusion period, 44 adult patients were already diagnosed with RA and followed in the rheumatology unit; all fulfilled the 1987 ACR criteria. An additional 51 adults were referred to the rheumatologist to be assessed for suspected RA during the study period, of which 25 were diagnosed with RA by the rheumatologist according to the 1987 ACR criteria. In total, 69 patients were diagnosed with RA in the district during the inclusion period. The mean age was 51.0 years (s.d. 10.4) and there was a higher prevalence in women compared with men, with a ratio of 65 women:4 men. Across all patients, 43.5% were positive for RF and 45.9% were positive for anti-CCP.

The overall prevalence of RA in Barika was 0.13% (95% CI 0.10, 0.17). The prevalence increased with age, but was <0.50% across all ages. The prevalence of RA was significantly higher in women compared with men (0.25% vs 0.02%, P < 0.001). The age- and sex-adjusted prevalence for the whole population of Algeria was estimated at 0.15%.

This is the first published report to evaluate the prevalence of RA in North Africa. Although a prevalence of 0.13% appears very low compared with previous reports from Europe and North America, the results are consistent with reports from developing countries [3–7].

In a systematic review of rates of RA prevalence according to the 1987 ACR criteria, the median prevalence of RA was 0.33 in Southern European countries, 0.50 in Northern European countries and 0.35 in developing countries. Published RA prevalence rates from sub-Saharan African countries range from <0.05% to 0.9%, with a higher prevalence in urban compared with rural populations [3–7]. Table 1 summarizes estimates of RA prevalence from African countries.

Discrepancies in published prevalence rates are due to many factors, including different methodologies (study design, case identification and case recording), different geographical areas and differences in age distributions between developing and Western countries.

In conclusion, this article is the first study to estimate the prevalence of RA in a North African district. The decision to use a rheumatologist to diagnose participants and the application of the 1987 ACR criteria were essential in ensuring high quality data.

Rheumatology key message
- The prevalence of RA in Barika, Algeria was 0.13% and it was estimated at 0.15% for the total population of Algeria.

Disclosure statement: The authors have declared no conflicts of interest.

Samy Slimani¹ and Aicha Ladjouze-Rezig²

¹Department of Medicine, Hadj Lakhdar University, Batna and ²Department of Medicine, University of Algiers 1, Algiers, Algeria.

Accepted 15 November 2013
Correspondence to: Samy Slimani, Department of Medicine, Hadj Lakhdar University, Batna 05000, Algeria.
E-mail: slimani@dr.com

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