INCIDENCE OF PSORIATIC ARTHRITIS IN FINLAND

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SUMMARY

Patients with psoriasis have an increased incidence of arthritis. Information on the incidence of psoriatic arthritis (PsA) is sparse. The present study covered those subjects who were entitled under the nationwide sickness insurance scheme to receive specially reimbursed medication for PsA in 5/21 central hospital districts in Finland (population basis ~1 million adults) in 1990. A total of 65 incident cases satisfied the concept of PsA. The annual incidence of PsA was 6/100,000 of the adult population (≥16 yr of age). The mean age at diagnosis was 46.8 yr. The peak incidence occurred in the 45–54 yr age group. The male to female ratio was 1.3:1. The incidence rate in the present study is in agreement with the sparse former figures, but age-specific incidence figures which have not been published earlier are also presented.

KEY WORDS: Arthritis, Psoriasis, Incidence, Epidemiology.

PATIENTS with psoriasis have an increased incidence of arthritis. In this respect, studies based on selected series collected in referral centres [1] have been more clear cut than population-based studies [2–4]. A strong association between psoriasis and arthritis has also been noted in family studies [5]. Patients with severe psoriasis probably have arthritis more frequently than those with mild psoriasis [1]. It is now commonly believed that a distinct entity exists, referred to as psoriatic arthritis (PsA) [1, 5–7]. This, however, lacks the detailed classification criteria available for many other rheumatic diseases. Moll and Wright [8] have defined PsA as psoriasis associated with inflammatory arthritis and usually a negative serological test for rheumatoid factor (RF).

The prevalence of PsA is estimated to be ~0.1% [6–10]. For many purposes, incidence is a more useful measure of disease occurrence than is prevalence. For instance, patients with chronic stable disease are over-represented in prevalence studies. Yet little information is available on the incidence of PsA. In a small series from Finland, the estimated incidence was 7/100,000 [11] and a preliminary report from the USA provided an estimate of the same order of magnitude [12]. In two series of patients with early synovitis, 3% had PsA [11, 13].

Official statistics, e.g. figures concerning the nationwide sickness insurance scheme, provide a good basis for epidemiological studies in Finland. This report supplements the picture of PsA epidemiology by providing recent figures on the incidence of the disease.

PATIENTS AND METHODS

Since 1966, the Sickness Insurance Act has provided for the prescription of drugs free of charge for certain chronic diseases, including chronic inflammatory rheumatic diseases (since an amendment made in 1987, 90% of the costs have been reimbursed). In 1990, glucocorticoids, non-steroidal anti-inflammatory drugs and disease-modifying anti-rheumatic drugs were reimbursed. The entitlement is usually for life, but can be for a fixed period. The national sickness insurance scheme covers the entire population of Finland.

Eligibility requires a comprehensive medical certificate written by the attending physician and approved by an expert adviser on behalf of the sickness insurance scheme. All inflammatory rheumatic diseases are grouped under one code in the population register of the Social Insurance Institution. The main diagnostic subsets are rheumatoid arthritis (RA), juvenile chronic arthritis, ankylosing spondylitis, chronic reactive arthritis and PsA. Systemic rheumatic diseases are grouped under another code.

Finland is divided into 21 central hospital districts. The present study embraced subjects entitled to specially reimbursed medication in 1990 in five districts (Jyväskylä, Kotka, Kuopio, Lahti and Tampere). The study area covered ~1 million inhabitants, ≥16 yr of age, i.e. one-quarter of the adult population in Finland. Information on the patients was obtained from drug-reimbursement certificates. Hospital records were relied on when the information in the reimbursement certificates was insufficient.

A total of 780 subjects were entitled to specially reimbursed medication for chronic inflammatory rheumatic diseases. PsA was the cause of entitlement in 65 cases. In three instances, the available information concerning diagnosis was insufficient.

The patient was defined as an incident case if he or she had psoriatic skin and/or nail involvement and arthritis and/or spinal involvement, and had no prior entitlement to anti-rheumatic medication for a fixed period. Three psoriatic RF-positive patients with symmetrical polyarthritis who satisfied the American Rheumatism Association (ARA) 1987 classification criteria for RA were excluded. For the purposes of the present study, the date of entitlement to anti-rheumatic medication was taken as the date of diagnosis. About
63% of cases had had symptoms for > 3 months but <2 yr, 17% for 2–4 yr and 20% for >4 yr.

Information on the age structure of the central hospital districts included in the study was obtained from the Finn Region database maintained by Statistics Finland at VTKK Group Ltd (formerly the State Computer Centre) through Raimo Tuomainen.

RESULTS

Sixty-five cases of PsA occurred in 1990. The annual incidence of PsA was 6.1/100 000 of the adult population (95% CI 4.6–7.6/100 000). The mean age at diagnosis was 46.8 yr (46.6 yr for men and 47.2 yr for women). The male to female ratio was 1.3:1. The peak incidence occurred in the 45–54 yr age group. The age-specific figures and incidence rates are shown in Table I and the clinical features of the incident cases in Table II.

In the present study, two patients showed a weakly positive test for RF, but did not satisfy the ARA 1987 classification criteria for RA. These two patients also had features of spondylarthropathies, such as distal interphalangeal joint arthritis and enthesitis. Among the 65 patients, seven cases (11%) satisfied the ARA 1987 classification criteria for RA. They were all RF negative and four were male.

Twenty-one patients had back pain, and radiographs of the sacroiliac joints had been taken for 19 of them. Altogether, X-ray examination of the sacroiliac joints was performed in 21 cases, of which 12 (57%) had radiological sacroilitis which was unilateral in half the cases. Six patients also had syndesmophytes, two without sacroilitis. Nine patients had both peripheral arthritis and radiological sacroilitis. Hand and foot radiographs were taken in 32/65 patients; in addition, hand radiographs only were taken in five and foot radiographs only in another five patients. Of 37 cases, 17 (46%) showed erosive changes in hand radiographs and 17 showed changes in foot radiographs. Nine patients (24%) had erosive changes in both hands and feet.

DISCUSSION

PsA is included in the spondylarthropathies. As a result of its heterogeneous clinical features, it has been difficult to develop a set of criteria which perform well in individual patients at an early stage of the disease [14]. The annual incidence of PsA in the present study series was 6/100 000 of the adult population. The incidence rate, however, to some degree underestimates the true incidence because only patients needing more than casual anti-rheumatic medication were included. Another point is that in ~15% of PsA cases arthritis begins before skin involvement [15, 16], and such cases could not be diagnosed as incident cases of PsA.

In an earlier study from Finland, in which the patient series was collected during 1974–1975, the incidence of PsA was 7/100 000 of the adult population [11]. This figure, however, was obtained by combining the results of two separate series. The overall incidence was obtained based on the Heinola Town Case-finding Study and the distribution of diagnoses was estimated on the basis of the Heinola Follow-up Survey of Arthritis.

The mean age at diagnosis was 46.8 yr. The mean interval from the first symptoms to the diagnosis was 2.3 yr (range 3 months–12 yr). The mean age at diagnosis was higher than in many clinically based series [15–18], but was in agreement with the study in an early synovitis out-patient clinic in Germany [13]. The peak incidence occurred later than in a patient series from England [15]. In most earlier studies, a slight predominance of females has occurred, but the figures in the present study are in agreement with a recent study from Spain [16].

In the present study, the number of affected joints could not be counted reliably to classify the patients into oligoarthritis and polyarthritis subgroups because the data were not keyed to any classification criteria. In other studies, the clinical picture seems to vary as a function of disease duration. When the duration has been short, the oligoarthritis pattern has been more common than polyarthritis [17, 18]. About 18% of all incident cases in the present series had radiological sacroilitis, which was in agreement with earlier studies [3, 16].

In PsA, RF can exist in low titres in 10–13% of the cases [14]. In the present study, three RF-positive cases with symmetrical polyarthritis were excluded. Only two patients had low RF titres, but they also had features of spondylarthropathies. In the RF-negative arthritis

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**TABLE I**

<table>
<thead>
<tr>
<th>Age group (yr)</th>
<th>Males</th>
<th>Females</th>
<th>All</th>
<th>Incidence</th>
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<tbody>
<tr>
<td>16–24</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td>25–34</td>
<td>8</td>
<td>6</td>
<td>14</td>
<td>2.4</td>
</tr>
<tr>
<td>35–44</td>
<td>8</td>
<td>6</td>
<td>14</td>
<td>2.5</td>
</tr>
<tr>
<td>45–54</td>
<td>10</td>
<td>9</td>
<td>19</td>
<td>11.8</td>
</tr>
<tr>
<td>55–64</td>
<td>7</td>
<td>4</td>
<td>11</td>
<td>7.7</td>
</tr>
<tr>
<td>65–75</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3.6</td>
</tr>
<tr>
<td>75–84</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>28</td>
<td>65</td>
<td>6.1</td>
</tr>
</tbody>
</table>

(95% CI 4.6–7.6)

**TABLE II**

<table>
<thead>
<tr>
<th>Clinical feature</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin involvement</td>
<td>60/65</td>
<td>92</td>
</tr>
<tr>
<td>Nail involvement</td>
<td>14/65</td>
<td>22</td>
</tr>
<tr>
<td>Distal interphalangeal joint involvement</td>
<td>13/65</td>
<td>20</td>
</tr>
<tr>
<td>Dactylitis</td>
<td>10/65</td>
<td>15</td>
</tr>
<tr>
<td>Rheumatoid factor</td>
<td>2/65</td>
<td>3</td>
</tr>
<tr>
<td>Back pain</td>
<td>21/65</td>
<td>32</td>
</tr>
<tr>
<td>Roentgenological sacroilitis</td>
<td>12/21</td>
<td>57</td>
</tr>
<tr>
<td>Spondylitis</td>
<td>14/21</td>
<td>62</td>
</tr>
<tr>
<td>Erosions in hand radiograph</td>
<td>17/37</td>
<td>46</td>
</tr>
<tr>
<td>Erosions in foot radiograph</td>
<td>17/37</td>
<td>46</td>
</tr>
</tbody>
</table>

*Data based on subjects whose radiological data were available.*
group, seven cases occurred which satisfied the 1987 ARA classification criteria for RA.

As a result of the heterogeneous clinical features and lack of detailed classification criteria, it has been difficult to conduct population-based incidence studies on PsA. By using drug-reimbursement certificates from the nationwide sickness insurance scheme as a database, the present study provides the annual incidence and the age-specific incidence rates of PsA in Finland in 1990. Further studies with more detailed clinical evaluation of PsA cases are needed.

ACKNOWLEDGEMENTS

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REFERENCES