Burden of Disease Analysis of Psoriatic Arthritis in Hungary

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AIM

- This study aimed to assess the direct non-medical, indirect and non-reimbursed health services costs of PsA in Hungary and to obtain an overview of patients' status, demographics, morbidity, and working capacity.

BACKGROUND

- Psoriatic arthritis (PsA) is a chronic inflammatory arthritis associated with psoriasis.[1] It is a very heterogeneous disease, characterized by asymmetrical peripheral (oligoarticular or polyarticular) joint inflammation and/or axial involvement (sacroiliitis, spondylitis).[2]
- Psoriasis affects 1–2% of the population, with PsA being prevalent in 10% of this group. In Hungary this corresponds to around 15,000–20,000 patients with PsA. The average prevalence of PsA is 0.07%.[2,3]
- Like other autoimmune inflammatory diseases, the course of PsA involves the individual burden to patients and ties up many social resources. It leads to a decline in social engagement and the loss of work ability, generating significant indirect costs.

METHODS

Method of data collection

- Between January and March 2014, a questionnaire survey was conducted among patients with PsA.
- Questions addressed the disease burden of PsA, such as sick leave, reduced working capacity, disability, non-reimbursed health services, need for assistance to perform daily activities, as well as patient demographics and disease characteristics.
- Questionnaires were transmitted to patients by the relevant patient organizations of PsA and were filled out voluntarily and anonymously.
- Responses were recorded on Medalyse (a portal developed by Healthware Consulting Ltd.), and R statistical software and Microsoft Excel were used for data processing and evaluation.
- The survey results are presented in aggregate form only.

Method of cost calculation

- During the analysis the direct non-medical, indirect costs and the costs of non-reimbursed health services were determined. The determination of direct medical cost was not the subject of this study.
- The direct non-medical costs included the cost of traveling (ambulance transport, other traveling costs) and informal care (help with self-care and traveling).
- The indirect costs included lost wages due to disability and reduced working ability (sick leave, reduced working capacity and disability pension).
- The unit costs of each examined cost type were derived from the Hungarian Central Statistical Office (KSH) and patient statements.
- An exchange rate of 303.59 Hungarian Forint (HUF) per Euro (EUR) was used.
- Missing data were not imputed in the analysis. Considered patient number is presented alongside results if lower than total patient number.

RESULTS

Patient demographics and disease characteristics

- 145 patients completed the questionnaire, of which 57% were women. Mean age was 54 years (Standard Deviation [SD]: 14 years) and average disease duration was 17 years (SD: 11 years).
- At primary diagnosis of PsA, 79% of patients had a full-time job, 4% had a part-time job and only 3% received disability pension **(Figure 1)**.
- At time of survey, only 32% of patients worked full-time, 4% part-time and the proportion of disability pensioners increased to 28% **(Figure 1)**.

Cost

- Average annual total cost was calculated by summing the direct non-medical, indirect and non-reimbursed services costs.
- Cost calculation results showed that the average annual total cost per PsA patient was 3,842€ (SD:5,516.4€). Within this, average annual direct non-medical cost was approximately 1,271€ (2,486.4€; 141 patients) and average annual indirect cost per patient was approximately 2,637€ (4,370.5€; 142 patients).
- Lost wages due to disability pension generated the highest average annual indirect cost per patient (2,734€; SD: 4,597€; 119 patients).
- The distribution of different cost types within direct non-medical and indirect costs are shown in **Figure 2**.

Subgroups

- In the working-age population (31–62 years, 95 patients) the total average cost per patient was 5,344€ (SD: 6,133€).
- The average costs were higher in cases of longer disease duration suggesting that the burden of disease increases with worsening of the condition (0–5 years: 2,640€; 6–10 years: 3,356€; 11–15 years: 4,151€; 16–20 years: 4,399€; 21–25 years: 6,724€; >26 years: 2,666€).
- During the survey the concurrence of psoriasis in PsA patients was also examined. The respondents classified themselves according to the following three groups:
  - Limited extent of skin symptoms (<15% of body surface area affected [BSA<15]): 57% of patients
  - Greater extent of skin symptoms (>15% of body surface area affected [BSA≥15]): 31% of patients
  - No skin symptoms: 11% of patients
- The average costs were determined for these patient groups. The results showed that patients with greater extent of skin symptoms generated higher costs suggesting an increased burden of disease for these patients **(Figure 3)**.

Figure 1. Distribution of patients by employment status at time of diagnosis and time of survey

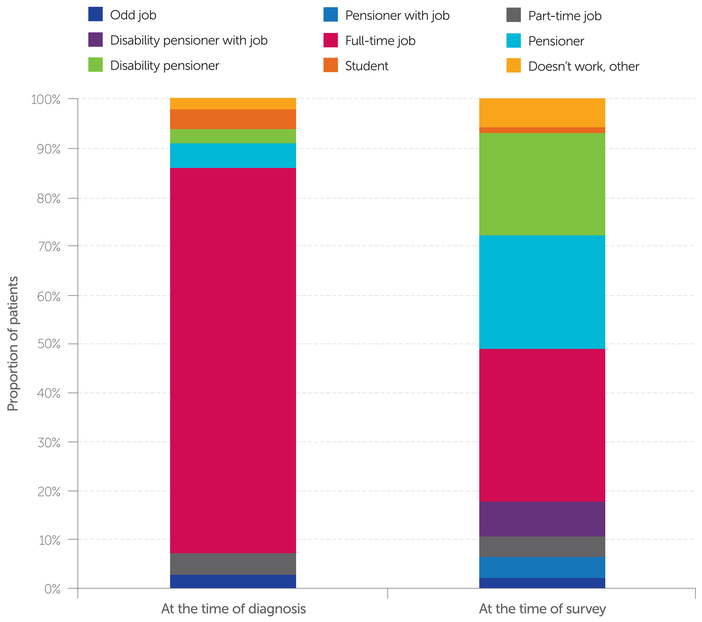


Figure 2. Distribution of different cost types

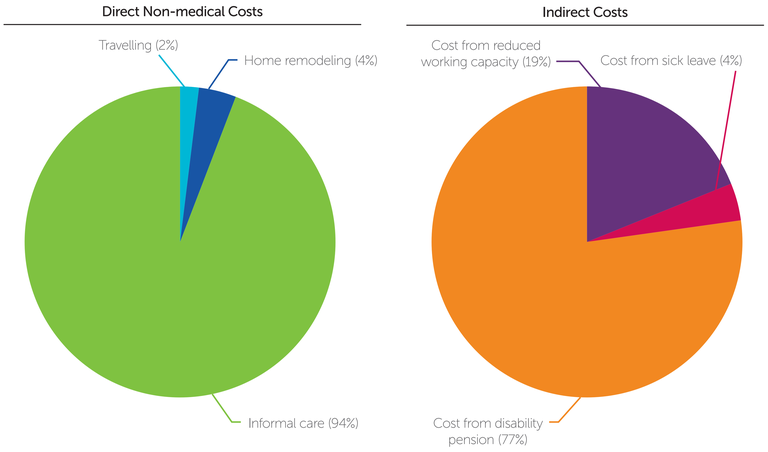
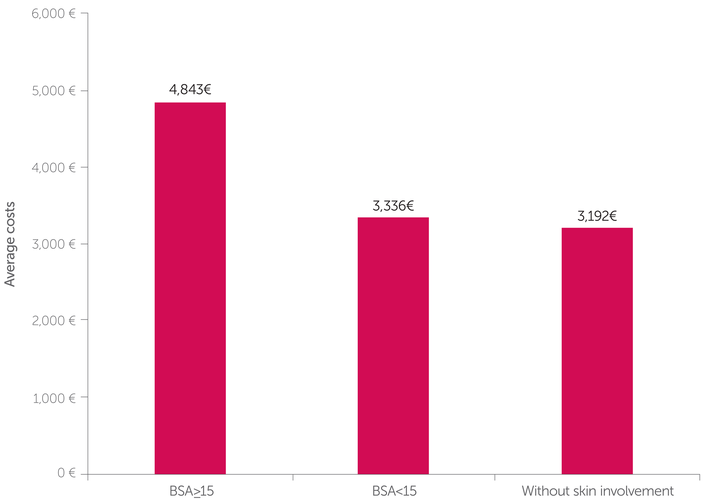


Figure 3. Average costs by extent of skin involvement



CONCLUSIONS

- PsA is a progressive chronic disease which leads to continuous deterioration of health status and permanent disability.
- During the average 17-year disease duration, one third of patients become disabled due to PsA. Generalizing the results, this means that 0.15% of the Hungarian population[2,3] drives 1% of the total disability pensioner population; total number of disability pensioners was 413,000 in June 2014.[4]
- Higher average costs were associated with longer disease duration and greater skin involvement.
- Patients may already have dropped out from the employment market in their active ages because of the disease's symptoms and variability, leading to reduced social engagement.

References

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