

Burden of arthropathy in psoriasis: Evidence from a tertiary care hospital in Sri Lanka

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Abstract

Psoriatic arthritis (PsA) is an inflammatory articular disorder, associated with cutaneous psoriasis. Epidemiology of PsA widely varies in literature and none is based upon Sri Lankan population. A descriptive cross sectional study was conducted among 118 diagnosed patients with psoriasis attending a dermatology clinic at the National Hospital of Sri Lanka. Prevalence of PsA was 28%. Among PsA patients, majority (57.6%) were males, mean age was 46 years (SD=13.0); ranging from 23-74 years. Polyarthritides mimicking rheumatoid arthritis (39%) and spondyloarthritis (21%) were the commonest types. Age >20 years; chronic plaque type of psoriasis; duration of psoriasis >2yrs; presence of nail changes; scalp involvement; and >10% body surface area involvement were factors significantly associated with development of PsA ($p<0.05$). Mean DLQI level among patients with PsA was 9.0 (SD=3.26), while it was 2.68 (SD=2.18) among psoriatic patients without arthritis. Chronic, extensive psoriasis with nails and scalp involvement should point towards regular, repeated screening for arthropathy to implicate optimum management.

Introduction

Psoriasis is a chronic immune mediated disease, affecting both the skin and the joints with significant impact on physical, emotional, and psychosocial wellbeing of the affected^{1,2}. Psoriatic arthritis (PsA) is a unique multifaceted inflammatory articular disorder, usually but not exclusively associated with cutaneous psoriasis. Epidemiological data on prevalence of psoriasis and psoriatic arthritis vary widely among different ethnic groups, partly due to the differences in genetic and environmental factors as well as different methodologies carried out in previous studies^{3,4}. However, when compared to other chronic non-communicable diseases, the epidemiological research data on psoriatic arthritis is relatively low and no published data was found based upon Sri Lankan population.

Absence of a standard case definition, methodological difficulties due to wide clinical

spectrum of the disease, relapsing and remitting nature, relatively low prevalence of the disease and difficulty of ascertaining past arthritis and psoriasis may have contributed to the paucity of available data to date⁵.

This study was conducted with the aim of describing the prevalence and the characteristics of psoriatic arthritis, and its impact on the patient's well being among patients with psoriasis attending a dermatology clinic in a tertiary care hospital of Sri Lanka.

Methodology

A hospital based, descriptive cross sectional study was carried out among patients diagnosed with psoriasis attending a dermatology clinic at the National Hospital of Sri Lanka in 2015.

All patients suspected of having psoriatic arthritis were subsequently confirmed by a consultant rheumatologist, following a thorough clinical examination and relevant investigations. Socio-demographic data and data on co-morbidities (confirmed by clinical records) were collected using an interviewer administered questionnaire.

The effect of psoriasis and PsA on patient's life style was assessed using DLQI⁶. Patients with psoriatic arthritis were categorized into the five sub types by the consultant rheumatologist based on the Moll and Wright classification⁷. Patients with arthritis other than psoriatic arthritis were excluded from the study. With a significant level of 95%, precision of 0.05 and taking the prevalence of psoriatic arthritis as 8% (in the absence of Sri Lankan studies, the prevalence of psoriatic arthritis among Indian psoriatic patients^{8,9}), the required sample size was 113. Prevalence of psoriatic arthropathy was given as prevalence of arthropathy per thousand patients with psoriasis (both already diagnosed and newly diagnosed patients) during the period of nine months starting from January 2015.

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There were no major ethical issues as there was no omission of the standard routine management to the non-consenting patients and there was no difference in the management for the study participants from the others. All study participants were enrolled after acquiring informed written consent. Data of the participants were handled only by the investigators and that information was not divulged to a third party. Ethical clearance was obtained from the ethics committee of the health institute; the ethical review committee of the National Hospital of Sri Lanka. The data were entered into and analyzed using the statistical programme SPSS 17th version. Descriptive statistics were used with means (SD) and proportions for analysis of quantitative and qualitative data respectively. Factors associated with psoriatic arthritis were assessed using the Chi square test at 0.05% significance level.

Results

The prevalence of PsA among psoriatic patients was 28%. Among them, majority (57.6%) were males and mean age was 46 years (SD=13.0); ranging from 23-74 years. Polyarthritismimicking rheumatoid arthritis (39%) and spondyloarthritis (21%) were the commonest types. Oligoarthritis, distal interphalangeal joint involvement and arthritis mutilans were 18%, 21%, and 1% were respectively (Table 1).

Majority (69.7%) had skin lesions prior to the development of arthropathy; 24% developed arthropathy before skin lesions and others developed both simultaneously (Figure 1).

Table 1. Prevalence of different types of arthritis

Type of arthritis	Prevalence
Polyarthritismimicking RA	39%
Asymmetrical oligoarthritis	18%
DIP	21%
Spondyloarthritis	21%
Arthritis mutilans	1%

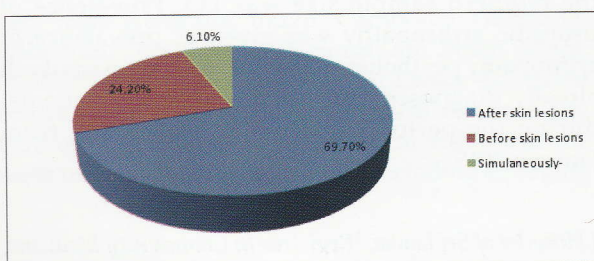


Figure 1. Onset of psoriatic arthropathy.

The factors significantly associated with development of PsA ($p < 0.05$) were; age of the patient > 20 years; chronic plaque type of psoriasis; duration of psoriasis > 2 yrs; presence of nail changes; scalp involvement; and extensive body surface involvement more than 10%. Though the findings were not statistically significant patients with PsA had higher prevalence of diabetes (15% Vs 12%), ischaemic heart disease (15% Vs 5%) and obesity (64% Vs 54%) compared to those without PsA.

Mean DLQI level among patients with PsA was 9.0 (SD=3.26), while it was 2.68 (SD=2.18) among psoriatic patients without arthritis.

Discussion

In our study the prevalence of arthropathy among psoriatic patients was higher than that in the other countries of the region. This can be due to fact that the study was conducted at a tertiary care hospital which is the final referral centre of the country. Therefore patients from various parts of the country drain in to this hospital for further management in addition to its host population. Also, this could be due to the higher rate of early detection of the disease in a tertiary care hospital. Polyarthritismimicking rheumatoid arthritis was the commonest sub type in our study and this finding was in keeping with previous studies^{10, 11, 12}.

Due to high prevalence rate, regular assessment for arthropathy should be undertaken in patients with extensive psoriasis. Significant psychosocial impact was noted by having psoriatic arthritis on patients life. This is shown by the higher DLQI value in patients with arthritis.

Chronic, extensive psoriasis with nails and scalp involvement should point towards regular, repeated screening for arthropathy among patients with psoriasis, thus implicating optimum management, as psoriatic arthropathy seems to have significant adverse impact on quality of life of psoriasis patients.

List of Abbreviations

PsA - Psoriatic arthritis

DLQI - Dermatology quality of life index

SPSS - Statistical package for the social science

SD - Standard deviation

Conflict of interest and grants

There are no conflicts of interest declared. No grant or commercial support was obtained for this study.

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