

## Psoriasis and osteoporosis: data from a Southern Italian population

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Dear Editor,

Data concerning the association between psoriasis and reduced bone mineral density (BMD) are limited [1–4].

We aimed to assess presence and severity of osteoporosis in subjects affected by moderate to severe psoriasis with or without arthritis by determining dual energy x-ray absorptiometry (DEXA). One hundred two consecutive patients with psoriasis, 26 of whom affected by the arthropathic form too, were enrolled.

In all subjects, BMD was measured at lumbar spine (L1–L4) in anterior and posterior projection using DEXA; results were recorded for each patient as *T* score (number of standard deviations above or below the mean for a healthy 30-year-old adult of the same sex and ethnicity as the patient). Osteoporosis and osteopenia were defined as *T* score  $\leq -2.5$  or lower and *T* score comprised between  $-1$  and  $> -2.5$ , respectively.

Each participant was graded for age, cigarette smoking ( $>10$  cigarette/daily), thyroid disorders, chronic hepatitis, obesity, and familiarity for osteoporosis. The sample age range was 17–54 years (mean age 42) and was constituted by 56 males and 46 females.

The sample analysis was performed on two separate groups: group A (76 patients with cutaneous psoriasis) and group B (26 patients with psoriatic arthritis).

Group A was affected by osteopenia and osteoporosis in 24 and 5 %, respectively. There was no difference in sex distribution in patients with osteopenia, whereas all the subjects with osteoporosis were females. In addition, mean age was lower in the osteopenia group (42 versus 50.5). Ninety percent of subjects with osteopenia did not present risk factors for osteoporosis, whereas 80 % of subjects with osteoporosis did present them (Fig. 1).

Group A data were in line with the Italian E.S.O.P.O. study (Epidemiological Study on the prevalence of osteoporosis) [5], indicating that percentages of osteopenia and osteoporosis in cutaneous moderate to severe psoriatic subjects are comparable to general population. Indeed, we confirmed Millard et al. [1] results in which no evidence for low BMD in psoriatic patients was detected. In contrast, Attia et al. [2] showed that psoriatic patients with or without arthritis had statistically significant lower *T* scores than controls.

Group B was affected by osteopenia and osteoporosis in 46 and 17 %, respectively. Most of subjects with osteopenia were males (64 %), whereas they were represented in 25 % among patients with osteoporosis. Age was also differentially distributed in the two subgroups: mean age was 42 in osteopenic patients versus 48.7 in osteoporotic ones. Sixty-eight percent of osteopenic patients were not affected by osteoporosis risk factors, whereas 75 % of osteoporotic subjects did present them (Fig. 2).

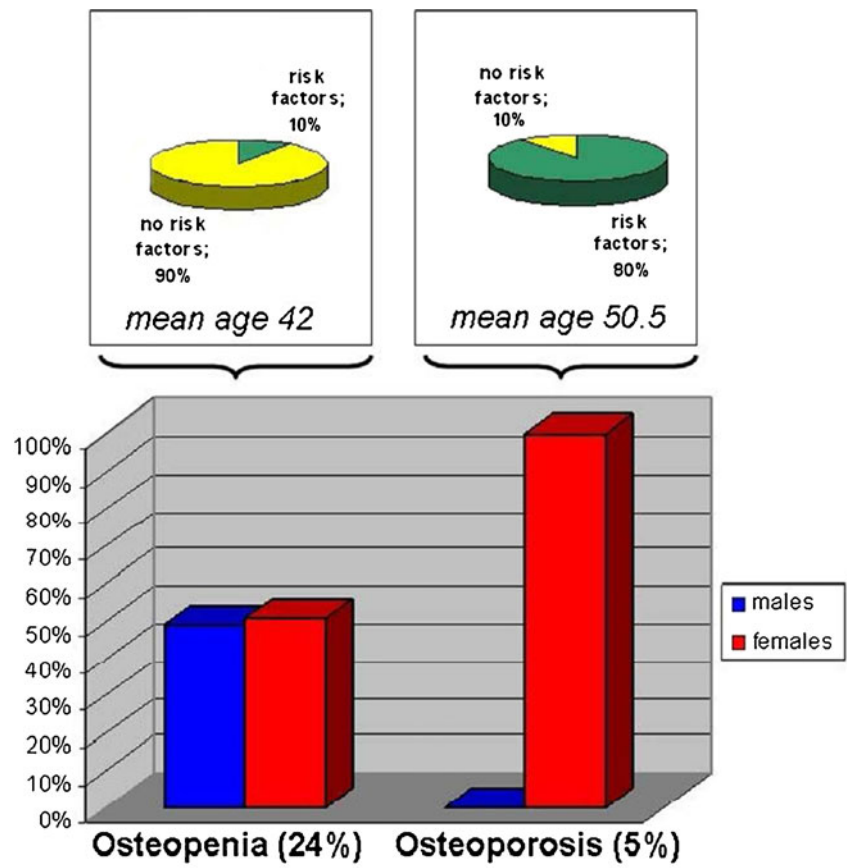
We confirmed Borman et al. [3] results in which they found more demineralization in arthritic psoriatic patients than in non-arthritic group. Our data also showed an interesting association between male young subjects with psoriatic arthritis and osteopenia, reinforcing the study of Dreier et al. [4]

Although some clinical data exist showing an association between psoriasis and osteoporosis, there remains

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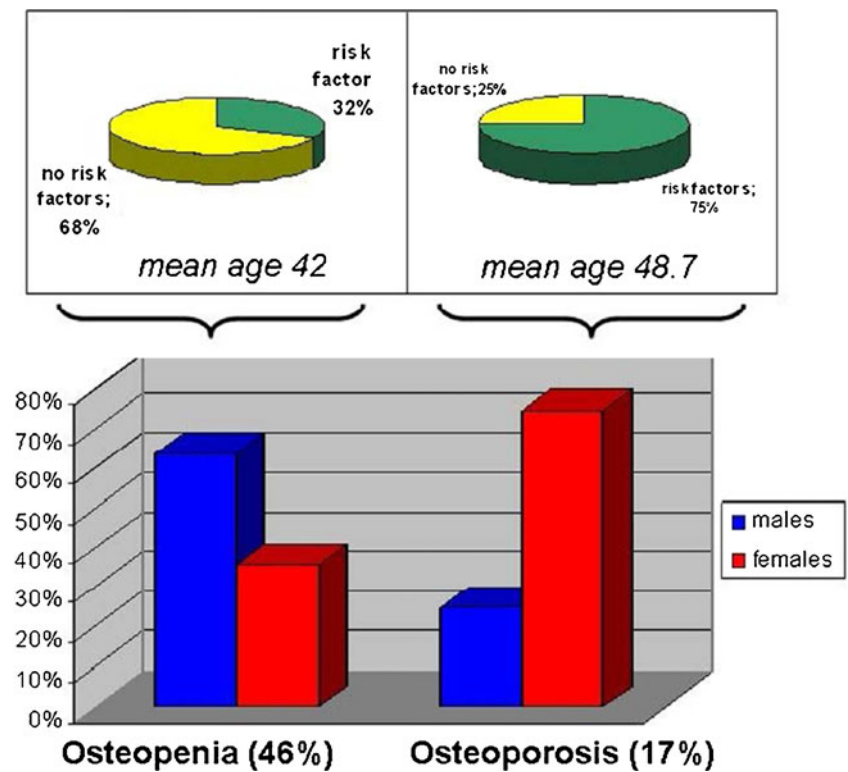
**Fig. 1** Distribution of osteopenia and osteoporosis in moderate to severe psoriasis (group A)



a lack of abundant clinical evidence in this area. Consequently, prospective studies are needed to assess the

possibility of osteopenia/osteoporosis as a comorbidity of psoriasis.

**Fig. 2** Distribution of osteopenia and osteoporosis in psoriatic arthritis (group B)



**Conflict of interest** None.

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