Psoriasis and metabolic syndrome: A case control study

Sir,

Psoriasis is a chronic inflammatory disease of the skin and joints, which is now considered a systemic inflammatory disease with Th-1 cells, Th-17 cells, and inflammatory cytokines contributing to its pathogenesis.[1] We conducted a case-control study in subjects above 18 years of age to study the association between psoriasis and metabolic syndrome, and to assess correlation between severity of disease

and presence of metabolic syndrome. Metabolic syndrome was diagnosed according to International Diabetes Federation criteria: Central obesity (waist circumference >90 cm in Indian men and >80 cm in Indian women) plus any two of the following criteria: Raised triglycerides: >150 mg/dL or specific treatment for this lipid abnormality, reduced high-density lipoprotein (HDL) cholesterol: <40 mg/dL in men or <50 mg/dL in women or specific treatment for this lipid abnormality, raised blood pressure: Systolic >130 mm Hg, diastolic >85 mm Hg or treatment of previously diagnosed hypertension or fasting plasma glucose >100 mg/dL or previously diagnosed type 2 diabetes.[2] PASI (psoriasis area assessment and severity index) score was used to classify psoriasis into mild and severe.

The mean (± standard deviation) duration of psoriasis amongst the cases was 7.5 years ± 8.3 years. The duration ranged from 6 months to 40 years. Amongst the cases, 47% of the patients had PASI <10 and 53% of the patients had PASI > 10. Hypertriglyceridemia (59% vs. 31%), (P = 0.01), abdominal obesity (45% vs. 39%) (P > 0.05) and hypertension (39% vs. 34%) (P > 0.05) were more common in cases, whereas diabetes mellitus (23% vs. 29%) (P > 0.05) was more common among the controls. Diabetes mellitus was the only component of metabolic syndrome which was more common among the controls. This observation was in accordance with the study by Gisondi *et al.*, but it was in contrast with the studies by Madanagobalane and Anandan,[3] Choi *et al.*,[1] and Ahmed *et al.*,[4]. On comparing the body mass index, psoriatic patients were significantly more obese (14% vs. 1%) (P < 0.05). We found that metabolic syndrome was more common in psoriatic cases than in controls and the differences were statistically highly significant (P = 0.005). The findings were in accordance with previous reports.[3-6] The proportion of the psoriatic cases with metabolic syndrome (37%), was much higher in our study when compared with previous studies reported in the Caucasian population. This gross difference is probably due to racial factors and the use of South Asian modified NCEP ATP III (National Cholesterol Education Programme Adult Treatment Panel) criteria.[3] The proportion of patients with metabolic syndrome was more in cases over the age of 25 than in controls (18% vs. 0%), which was comparable to Indian studies.[3,6] Reduced HDL levels (58%) was the most common feature of metabolic syndrome, followed by central obesity (45%), hypertension (39%), raised triglyceride levels (33%), and diabetes (23%). In this study, smokers and alcoholics were more among the cases than the controls (P = 0.007), similar to various other studies.[1,3,5] The mean age was higher in psoriasis patients with metabolic syndrome than in those without metabolic syndrome, which was comparable to the study by Gisondi *et al.*,[5] and Ahmed *et al.*[4] However, in contrast to these reports, the cases with metabolic syndrome did not have earlier disease onset. The severity of disease was more in cases with metabolic syndrome than in those without metabolic syndrome, though it was not statistically significant. This was comparable to the study conducted by Choi *et al.*,[1] (97.1% vs 77.2%), However, Nisa and Qazi[6] reported that PASI >10 was more common in patients without metabolic syndrome than in patients with metabolic syndrome (P > 0.05). Various studies conducted in India and abroad have proved the increased prevalence of metabolic syndrome among psoriatic patients. In this study, the association is not limited to severe disease and is independent of the duration of disease and can present from the late second decade. This emphasizes the need for regular evaluation of psoriatic patients, even younger patients and those with mild disease, for the presence of any of the components of metabolic syndrome.

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