Psoriasis coexistent with multiple sclerosis: a case series

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Introduction: **Previous reports suggest an increased risk of psoriasis in Multiple Sclerosis (MS) patients (1, 2). Prevalence of psoriasis among MS patients and their family members is considered controversial (1, 3). T-cell immunity plays an important role in the pathophysiology of both MS and Psoriasis. Common pathways of immune disregulation, shared by both diseases, are implicated in cases of MS outburst during psoriasis treatment with Tumor Necrosis Factor alpha (TNF-a) inhibitors (4), and vice-versa during Interferon – Beta (IFN-B) treatment (5). Finally, high incidence of brainstem and cerebellar involvement in MS patients with psoriasis has been recently reported (6).**

Objectives: **We aimed to evaluate the prevalence of psoriasis in a group of 417 MS patients and to identify any special characteristics in those patients carrying both diseases, in respect of the natural history and the clinical, laboratory and imaging findings of MS.**

Methods: **We retrospectively reviewed the records of all patients examined at the Unit of Demyelinating Diseases of the 1st Neurology Department of Athens University, during the period 2010-2011. All patients fulfilled the 2005 revised McDonald criteria for definite MS or Clinically Isolated Syndrome (CIS). Clinical data collected were age at disease onset, disease duration, initial symptoms, disease subtype, family history of autoimmunity, medication and Expanded Disability Status Scale (EDSS) score at the time of examination. Cerebrospinal fluid (CSF) and Magnetic Resonance Imaging (MRI) data were also recorded.**

Results: **We identified a subgroup of 12 patients (9 women, 3 men) with MS and psoriasis (2.88%). 6 of them had Relapsing–Remitting MS (RRMS), 4 CIS, 1 Primary Progressive MS (PPMS) and 1 Secondary Progressive MS (SPMS). The onset of psoriasis preceded that of MS in all our cases by 3 to 45 years. Plaque type psoriasis was prominent (83%), while arthritis was diagnosed in 3 patients (25%) [Figure 1]. Only 1 patient had type II psoriasis (≥ 40 years old at disease onset). The mean age of MS onset was 38±11.20 years. The mean EDSS score was 2.75±1.90. Seven patients had clinical evidence of brainstem or cerebellar involvement. MRI lesions' distribution and morphology were typical for MS in 11 patients (5 with infratentorial lesions). Only 1 patient had a single tumor-like lesion at MS onset. CSF oligoclonal bands (OCBs) were positive in 6 patients (50%). 3 patients reported improvement in psoriasis symptoms after the onset of MS and 3 aggravation (2 of them treated with IFN-B 1b). 4 out of 10 patients reported psoriatic lesions' improvement during MS relapse (40%). 2 patients presented with CIS during psoriasis treatment with Etanercept and one during treatment with Ustekinumab (Interleukin 12 & 23 inhibitor). 10 patients had at least one 1st or 2nd degree relative with autoimmune disorder (50% psoriasis) [Figure 2].**

Figure 1. Patient distribution according to type of psoriasis.

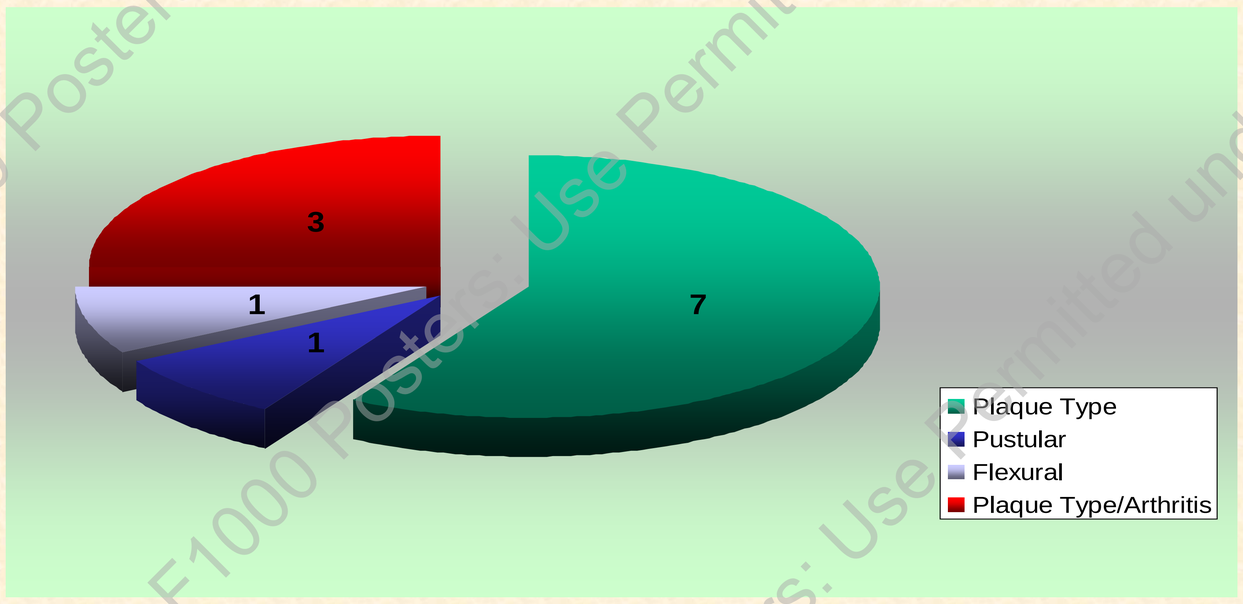
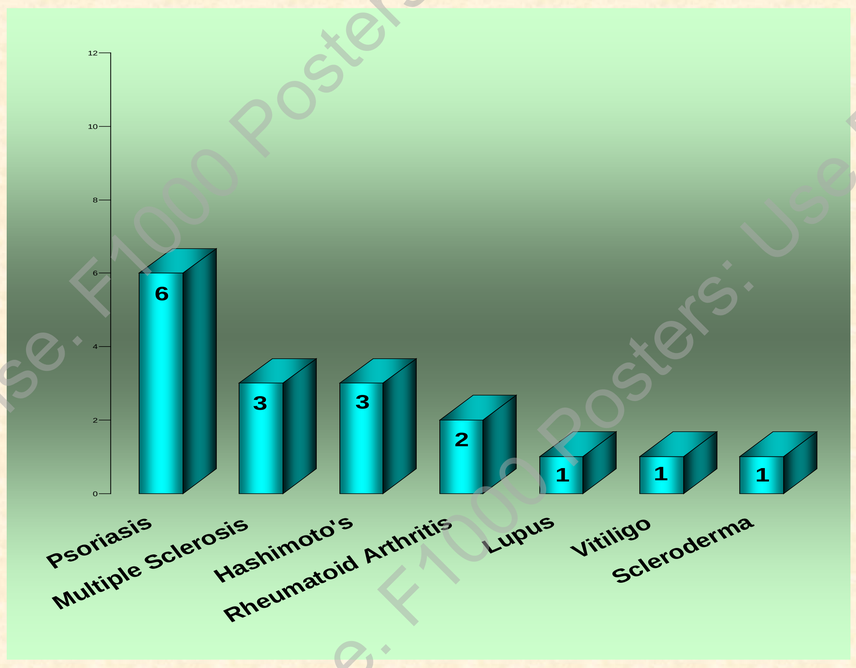


Figure 2. Number of patients with a 1st or 2nd degree relative with autoimmune disorder.



Conclusion: **No significant increase in the incidence of psoriasis was found in our group of MS patients in comparison to the general population (2.5%) (7). Psoriasis preceded MS in all our cases, with a higher incidence of arthritis than the usual reported among psoriasis patients (5-10%) (7). High familiar autoimmunity prevalence was also found. Psoriasis improvement during MS relapses was reported in 4 patients. Psoriasis aggravation was noted in 2 MS patients treated with IFN-B 1b. 3 patients were treated with TNF-a inhibitor or monoclonal antibody for psoriasis when MS onset occurred. Disease severity, cerebellar and / or brainstem involvement, OCBs' incidence, lesion distribution and morphology did not differ from MS patients without psoriasis. However, our results must be cautiously interpreted because of the small number of patients examined, carrying both diseases.**

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