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Restless legs syndrome is associated with mast cell activation syndrome

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Abstract

Study objectives: Mast cell activation syndrome (MCAS) is an inflammatory and allergic disorder. We determined the prevalence of restless legs syndrome (RLS) in MCAS because each common syndrome may be inflammatory in nature and associated with dysautonomia.

Methods: Individuals with MCAS were evaluated for RLS by two standard questionnaires. Prevalence comparisons included spouse control patients and two prevalence publications. MCAS diagnosis required mast cell (MC) symptoms in ≥ 2 organs plus ≥ 1 elevated MC mediators, improvement with MC therapy, and/or increased intestinal MC density. Clinical variables were studied.

Results: There were 174 patients with MCAS (146 female, 28 male, mean age 44.8 years) and 85 spouse control patients (12 female, 73 male, mean age 50.9 years). Patients with MCAS as a whole had a higher prevalence of RLS (40.8%) than spouse control (12.9%) ($P < .0001$). Male patients with MCAS had a higher prevalence of RLS (32.1%) than male controls (12.3%, odds ratio [OR] 3.4, confidence interval [CI] 1.2-9.7, $P = .025$), American men (8.4%, OR 5.2, CI 2.2-12.0, $P < .001$), and French men (5.8%, OR 7.7, CI 3.4-17.1, $P < .001$). Female patients with MCAS also had a higher prevalence of RLS (42.5%) than female controls (16.7%) but this did not reach statistical significance perhaps because of the sample size of the female controls. However, female patients with MCAS had a statistically higher prevalence of RLS than American women (10.0%, OR 6.7, CI 4.5-9.7, $P < .0001$) and French women (10.8%, OR 6.1, CI 4.4-8.6, $P < .0001$).

Conclusions: RLS appears to be associated with MCAS. Effects of mast cell mediators, inflammation, immune mechanisms, dysautonomia, or hypoxia may theoretically activate RLS in MCAS.

Keywords: autonomic dysfunction; hypoxia; immune; inflammation; mast cell activation syndrome; prevalence; restless legs syndrome.

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