

# Sympathetic dysfunction in patients with primary Sjögren's syndrome

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**Purpose.** Investigation of sympathetic nervous function in patients with primary Sjögren's syndrome.

**Material and methods.** Autonomic nervous function was evaluated by finger skin blood flow test (vasoconstrictory (VAC) index, which measures sympathetic nervous function, deep breathing test (expiration/inspiration (E/I) ratio) and tilt table tests (acceleration and brake indices (AI and BI)) in 31 patients with primary Sjögren's syndrome. The controls consisted of 80 (finger skin blood flow test controls) and 56 (deep breathing and tilt table tests controls) healthy individuals. As autonomic nervous function tends to deteriorate with advancing age the values were age corrected.

**Results.** The patients were found to have a significantly higher VAC index compared to healthy controls ( $p < 0.05$ ) and 23% of the patients were found to have a significantly increased VAC index, i.e.  $> 2SD$ , indicating sympathetic neuropathy, compared to age matched controls. Furthermore the E/I-ratio as well as systolic blood pressure 1 and 8 minutes after tilt were found to be significantly lower in patients compared to controls ( $p < 0.05$ ,  $p < 0.01$ , and  $p < 0.01$  respectively). No significant correlations were found between the VAC index and the other autonomic nervous function parameters (E/I-ratio, AI and BI), the objective clinical ophthalmologic and oral tests, at the time of diagnosis (break up time, Schirmer-I test, rose bengal staining, lower lip biopsy, unstimulated & stimulated whole sialometry and salivary gland scintigraphy) respectively.

**Conclusion.** We conclude that sympathetic neuropathy may exist in patients with primary Sjögren's syndrome.