Stiff-Person Syndrome: long-term follow up

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Stiff-person syndrome (SPS) is an unusual neurological disorder characterised by rigidity caused by continuous involuntary motor unit activity and stimulus-sensitive spasms. It may be classified with other disorders of autoimmune aetiology which share similar clinical features, including stiff limb syndrome, jerking SPS, and progressive encephalomyelitis with rigidity and myoclonus (PERM).[1,2] Immunomodulatory treatments may be helpful in modifying disease course. However, the extant literature seems largely silent on the question of prognosis in SPS.[3] A patient with SPS who has never received any form of immunosuppressive or immunomodulatory therapy and has been followed up for almost twenty years is presented.

Case report

The patient initially developed neurological problems in her mid-50s, around 1993-4, with rigidity in the legs which was initially painful, associated with spasms which were both spontaneous and startle-induced (e.g. by sudden noises). Numerous investigations at this time were normal or negative, including MR imaging and CSF analysis. The diagnosis of SPS was eventually made with the finding of a raised serum anti-GAD antibody titre (2381 CPM/μl). The patient developed diabetes mellitus some seven years after the onset of neurological symptoms, initially controlled with oral antidiabetic agents but later requiring insulin. No other autoimmune disorders emerged subsequently.

Initially her neurological status gradually worsened but then seemed to plateau. From the late 1990s up to the most recent follow-up in mid-2011, the patient's condition has been essentially stable. Her stiffness has persisted but spasms have been largely controlled with oral baclofen (around 20-30 mg/day). She is able to walk around 20 metres using a zimmer frame and wearing support boots but requires a wheelchair for longer distances. Bilateral lymphoedema in the legs has complicated the clinical picture in the past two years.

Discussion

Although this patient's prognosis was initially judged to be gloomy (sudden death from unexplained metabolic acidosis or autonomic crisis has been reported in up to 10% of SPS patients[2]), she has remained clinically unchanged for more than 10 years.

The natural history of SPS is uncertain, but probably variable. Reviews suggest that it generally stabilizes over months to years following an initial progressive phase,[2] as in this patient, leaving a prolonged period of survival with fixed neurological disability. It is moot whether early intervention with immunological therapies whilst this patient was declining might have preserved greater function.[3]

Late and missed diagnosis of SPS is well recognised,[4,5] with functional disorders sometimes entering the differential diagnosis.[6] ◆

REFERENCES

1. Barker RA, Revesz T, Thom M, Marsden CD, Brown P. *Review of 23 patients affected by the stiff man syndrome: clinical subdivision into stiff trunk (man) syndrome, stiff limb syndrome, and progressive encephalomyelitis with rigidity.* J Neurol Neurosurg Psychiatry 1998;65:633-40.
2. Duddy ME, Baker MR. *Stiff person syndrome.* Front Neurol Neurosci 2009;26:147-65.
3. Gnanapavan S, Vincent A, Giovannoni G. *Surviving stiff-person syndrome: a case report.* J Neurol 2011;258:1898-900.
4. Andreadou E, Kattoulas E, Sfagos C, Vassilopoulos D. *Stiff person syndrome: avoiding misdiagnosis.* Neurol Sci 2007;28:35-7.
5. Yeow TP, Tomkin GH. *A delayed diagnosis of stiff person syndrome.* Hosp Med 2004;65:178-9.
6. Fleischman D, Madan G, Zesiewicz TA, Fleischman M. *Stiff-person syndrome: commonly mistaken for hysterical paralysis.* Clin Neurol Neurosurg 2009;111:644.