Rheumatic chorea and lupus anticoagulant

Two patients were diagnosed as Sydenham's chorea out of 322 patients seen in our movement disorder clinic in 1991–93. Both had lupus anticoagulant.

Patient 1 was a 15 year old girl who had had three attacks of generalised chorea within two years. The first attack occurred a month after a pharyngitis episode; it was the most severe and the longest, lasting five months. Because of the choreo-tremor-hypertonic kinetic movements were severe and only slightly improved by sodium valproate (1500 mg daily) and haloperidol (3 mg daily), corticosteroid treatment was required for two months (prednisone, initial dosage 40 mg daily). She had a history of asthma, which was treated with cromoglicate, and frequent episodes of pharyngitis. There was no other relevant personal or family history. Her physical examination was normal. Laboratory investigations showed an antistreptolysin-O titre between 300 and 621 Todd units (normal < 250). Separately determined partial thromboplastin time during the first attack of chorea showed prolonged values (57 seg; control 32-5 seg), not corrected by the addition of normal plasma. In the two subsequent relapses of chorea only a slight prolongation of the activated partial thromboplastin time was detected. Anticardiolipin IgG antibodies ranged between 6-9 and 19 U GPL/ml (normal, < 15). Anticardiolipin IgM antibody concentrations were normal. Brain MRI showed a slight asymmetry of the frontal horns of the lateral ventricles, but there was neither change of signal nor gadolinium enhancement. Since February 1993, she has remained asymptomatic, just receiving prophylactic treatment with intramuscular penicillin.

Patient 2 was a 12 year old girl who presented with mild generalised chorea in July 1992. No other neurological or systemic abnormalities were seen. One year earlier she had had a pharyngitis episode followed by fever and migratory polyarthritis. There was a family history of rheumatic fever without chorea. Laboratory investigations showed antistreptolysin-O titres between 300 and 460 Todd units, and prolonged activated partial thromboplastin time (39 seg; control 30 seg) not corrected by the addition of normal plasma. Anticardiolipin antibody concentrations were normal. Brain MRI was normal. The patient was treated with sodium valproate (1000 mg daily) and prophylactic intramuscular penicillin, and the choreic movements disappeared within the next few months. Although an increased titre of antistreptolysin-O antibody is still present, subsequent coagulation studies have been normal.

Extensive investigations showed no other abnormalities in either case. Thus two patients with rheumatic chorea and prolonged activated partial thromboplastin time are reported. Although more specific coagulation tests1 were not done, lupus anticoagulant is the most probable explanation for the increased activated partial thromboplastin time detected in both cases. In patient 1, a high titre of anticardiolipin IgG antibodies was also detected.

Rheumatic fever and lupus anticoagulant are two known causes of immunologically mediated chorea, and lupus anticoagulant seems to represent the main biochemical abnormality responsible for chorea in systemic lupus erythematosus. Although lupus anticoagulant has been associated with chorea gravidarum,2 and anticardiolipin antibodies with rheumatic fever,3 to our knowledge, lupus anticoagulant had not been reported in patients with rheumatic chorea.

Although little is known about the role of antiphospholipid antibodies, anticardiolipin antibodies seem to be unrelated to the rheumatic chorea pathogenesis.4 Different protein excitations responsible for lupus anticoagulant and anticardiolipin antibodies have however, been isolated. Therefore, the antineuronal antibodies responsible for rheumatic chorea could be more related to lupus anticoagulant than to anticardiolipin antibodies.