Ticlopidine-induced lupus with renal involvement

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Introduction

Ticlopidine hydrochloride is a platelet aggregation inhibitor that is used for the prevention of vascular thrombosis. So far, only six cases of ticlopidine-induced lupus have been documented in the literature [1–3]. We report here a first case of ticlopidine-induced lupus with renal involvement.

Case

A 71-year-old Japanese man was admitted on 24 January 2005 because of fever, arthralgia, chest pain and dyspnea. He had suffered from cerebral infarction 2 years previously, and had been treated with ticlopidine (200 mg/day) since then. On admission, his temperature was 37.4°C, and C-reactive protein (CRP) was elevated to 19.7 mg/dl. Renal function was normal, and there was no proteinuria or microhaematuria. Chest X-ray films revealed bilateral pleural effusion, and an aspirate indicated it as exudates. Within 2 weeks of admission, proteinuria (1.5 g/day), and microhaematuria developed. Laboratory tests showed a positive anti-nuclear antibody (ANA, 1:640), a positive anti-double-strand DNA IgG antibody (ds-DNA-Ab, 41.8 U/l, reference range: < 20 U/l), and a high anti-single-strand DNA IgG antibody (ss-DNA-Ab, 189.4 AU/ml, reference range: < 40 arbitrary units/ml). Lupus erythematosus cells in the pleural aspirate and a high titre of serum anti-H2A/H2B histone antibody (>100 U/ml, normal reference range: < 20 U/ml) were detected. Serum complement levels were within the normal range. Finally, he was diagnosed as having ticlopidine-induced lupus.

Renal biopsy was performed after discontinuation of ticlopidine. Seven glomeruli were seen on light microscopy, and glomerular changes were mild with segmental proliferation of mesangial cells and matrix. Mild tubular atrophy, interstitial fibrosis and monocye infiltration were also seen. Immunofluorescent microscopy revealed positive staining for C3 and IgG, and C1q in the mesangial area. Electron microscopy revealed electron-dense mesangial and subendothelial deposits. Since withdrawal of the drug did not improve his symptoms and laboratory abnormalities, a low dose of oral prednisolone (15 mg/day) was adminstered. Two months later, both CRP and ss-DNA-Ab improved to the normal range, and proteinuria decreased to 0.3 g/day. His pleuritic chest pain and pleural effusions completely resolved.

In ticlopidine-induced lupus, arthralgia was found in all and serositis was found in half of the patients [1–3]. The interval from starting drug ingestion to the onset has varied from 1 month to 2 years. Haematological, skin or central nervous system involvement has never been seen [1–3]. The mechanism of drug-induced lupus has not been fully elucidated. Acetylation capacity is thought to be related [4], but there is no acetylation step in the metabolism of ticlopidine. Withdrawal of the suspected drug usually improves the clinical manifestations. However, steroids may be used in patients who have drug-induced lupus with rapid progression or severe pathological damages [5]. The therapeutic strategy may need to be considered on a case-by-case basis, depending on the pathological and clinical features of each patient.

Conflict of interest statement. None declared.

References


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