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Letter to the Editor: Naproxen Thrombocytopenia

Naproxen, a commonly used nonsteroidal anti-inflammatory drug, is not listed as a drug implicated in causing immunologically mediated thrombocytopenia [1,2]. The manufacturer, Syntex Incorporated, had no information regarding the mechanism of thrombocytopenia caused by Naproxen. The following case report illustrates an immunologically mediated thrombocytopenia caused by ingestion of Naproxen.

A 58-year-old female was treated with Naproxen, 375 mg, daily for 1 month for osteoarthritis. Five months later, she was again started on Naproxen, 250 mg b.i.d. After three weeks, she noted petechiae and purpura on her arms and legs as well as small hemorrhagic bullae on her tongue and oral mucosa. She had no other sites of bleeding, nor had she ever had any prior history of bleeding. She was not taking any other medications, nor did she ingest alcohol. Physical examination was unremarkable except for the presence of widespread petechiae and oral mucosal bullae. She did not have splenomegaly.

Laboratory investigations included a normal hemoglobin, white blood cell count, differential, and morphology. Her platelet count was 10×10^9/L, and the peripheral blood film revealed numerous megathrombocytes. A bone marrow aspiration was normal except for increased numbers of megakaryocytes. Normal investigations included radionuclide liver spleen scan, rheumatoid factor, antinuclear factor, complement levels, acute and convalescent viral titers, serum protein electrophoresis, liver function tests, urinalysis, prothrombin time, partial thromboplastin time, and a direct antiglobulin test.

An IgG antiplatelet antibody was detected in the serum of the patient by indirect assay by solid phase and Capture-P immunoassay. A direct assay by flow cytometry showed increase in platelet-associated IgG and platelet associated C3 on the patient's platelets.

The Naproxen was withheld, and within 3 days, the platelet count had risen to 160×10^9/L. Within 6 days, the count had risen further to 371×10^9/L. The patient was seen 1 month later and had a platelet count of 246×10^9/L. Repeat investigations at that time showed no antiplatelet antibodies. In 1 year of follow-up, thrombocytopenia has not recurred, and no evidence of other causes of immune-mediated thrombocytopenia have become clinically evident.

The clinical time course, physical findings, peripheral blood, and bone marrow features, the demonstration of antiplatelet and platelet-associated antibody, as well as the response to withdrawal of Naproxen, all strongly suggest that this case illustrates immunologically mediated thrombocytopenia caused by ingestion of Naproxen.

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