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CASE REPORT

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Antiphospholipid syndrome with complete abdominal aorta occlusion and chondritis

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Abstract We report a case of a 42-year-old man with antiphospholipid syndrome (APS) with chondritis. He presented with preceding insidious progressive occlusion of the bilateral common iliac arteries extending to the lower two-thirds of the abdominal aorta. Active thrombotic events developed concurrent with the onset of chondritis, and resulted in massive thromboses in multiple organs and renal dysfunction. Both conditions responded well to combined intravenous high-dose methylprednisolone and anticoagulation therapy. The inflammatory component of his disease may have played a major role in the pathogenesis of thrombosis given the concurrent active inflammation from his chondritis.

Key words Antiphospholipid syndrome · Chondritis · Leriche's syndrome · Relapsing polychondritis · Systemic lupus erythematosus

Introduction

Antiphospholipid syndrome (APS) involves small or medium-sized vessels, and when severe multifocal thrombotic events develop it can result in significant mortality.[1–3] We describe a rare case of APS with preceding progressive large vessel occlusion whose active and multiple thrombotic events were concurrent with new-onset chondritis. Both active thrombotic events and chondritis were successfully treated with high-dose corticosteroids. We discuss the possible participation of the inflammatory aspects of chondritis in the triggering event that led to a cascade of multifocal small-vessel thromboses in APS.

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Case report

A 42-year-old Japanese man was admitted to our hospital on May 11, 1996, complaining of severe right hypochondrial pain and fever which had lasted for 3 days.

His medical history included the development of gait disturbance in March 1990. Angiography showed stenosis of the bilateral common iliac arteries and the development of collateral arteries in the pelvis. Leriche's syndrome was diagnosed in another hospital. Although he was noted to have a prolonged activated partial thromboplastin time (APTT), no further investigation was performed. He underwent angioplasty of the left common iliac artery and anticoagulant therapy in 1991. He refused further anticoagulation treatment after 3 months of therapy, and did not manifest any further symptoms of ischemia until this admission. He denied any symptoms of intermittent claudication, abdominal angina, or sexual impotence.

On admission, a physical examination revealed a temperature of 37.6°C and blood pressure of 180/116 mmHg. Examinations of his eyes, ears, nose, lungs, and heart were unremarkable. A marked tenderness was noted in his right hypochondrium and left flank, but there were no peritoneal signs. No neurological deficits were noted. On the 3rd hospital day, hoarseness and bilateral auricular chondritis with erythematous swelling and tenderness developed. Laboratory data revealed mild proteinuria, microscopic hematuria, and granular and red blood cell casts on urinalysis. His erythrocyte sedimentation rate was elevated at 117 mm/h. WBC count was 7100/mm^3, with lymphocytopenia of 600/mm^3 and thrombocytopenia of 86 000/mm^3. Fibrin degradation products were high at 23.2 mg/ml (normal <10 mg/ml) and APTT was prolonged at 55.9 s (normal 25.6–37.6 s). Aspartate aminotransferase of 36 IU/l (normal 11–31 IU/l), alanine aminotransferase of 58 IU/l (normal 4–31 IU/l), and serum creatinine of 1.5 mg/dl (normal 0.7–1.3 mg/dl) were all elevated. C-reactive protein was 15.5 mg/dl (normal <0.4 mg/dl). Antinuclear antibodies were positive at a titer of 1:160 with a homogeneous pattern. Anti-ssDNA (ELISA) antibodies were 103 IU/l (normal <20 IU/l). Anti-

dsDNA (ELISA) antibodies, anti-Sm antibodies, and anti-RNP antibodies were all negative. Lupus anticoagulant (dRVVT) was positive. IgG and IgA anticardiolipin antibodies and anticardiolipin-β_2GPI complex were positive at a titer of 52 GPL/unit, 19 APL/unit (Specialty Laboratories, Santa Monica, CA, USA), and 77.8 U/ml (normal <3.5 U/ml), respectively.

A diagnosis of APS with chondritis was made, and 60 mg/day prednisolone and intravenous heparin sodium were administered. The auricular inflammation and fever resolved in a few days. While in the hospital, he developed severe left upper abdominal and left back pain, blood-streaked sputum, and gross hematuria associated with an elevation of lactate dehydrogenase to 563 IU/l (normal 249–438 IU/l) and creatinine to 1.9 mg/dl. An abdominal X-ray showed an abnormal gas shadow in the small intestine. Computed tomography of the abdomen revealed a small-sized right kidney and the absence of blood flow in the lower two-thirds of the abdominal aorta. Hepatic and intestinal infarcts were not seen on the CT scan. Pulmonary scintigraphy revealed a pulmonary embolism in the right upper lobe. Digital subtraction angiography showed complete occlusion of the abdominal aorta just distal to the origins of the renal and superior mesenteric arteries (Fig. 1). These symptoms and data suggested a flare-up of multiple organ infarctions in the lung, left kidney, liver, and intestinal tract accompanied by renal insufficiency and hypertension. Methylprednisolone pulse therapy at 1 g/day was administered, in addition to anticoagulant therapy. After the initiation of pulse therapy, no further thrombotic symptoms developed. After 2 weeks, the steroids were tapered off and heparin sodium was switched to warfarin potassium. At discharge on the 67th hospital day, the patient was asymptomatic. Lupus anticoagulant remained positive, but the APTT normalized and IgG anticardiolipin antibodies and anticardiolipin-β_2GPI complex were reduced to 13 GPL/unit and 21.3 U/ml, respectively. His serum creatinine was down to 1.4 mg/dl.

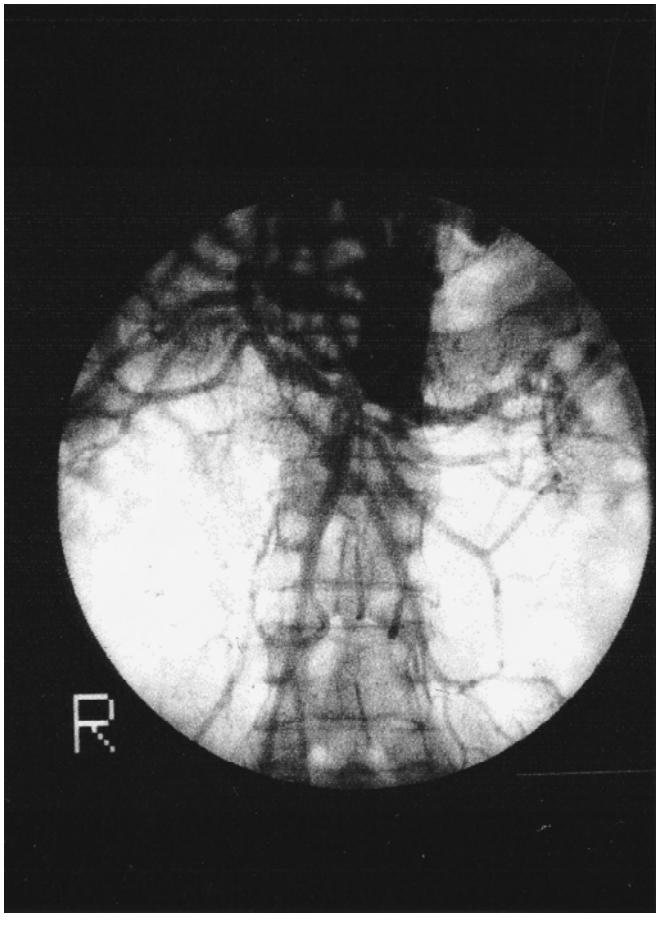

Fig. 1. Abdominal aortography showing the complete shutdown of blood flow in the abdominal aorta just distal to the origins of the renal and superior mesenteric arteries. No atherosclerotic changes were noted in this or other views

Discussion

This patient initially presented with thrombosis of the bilateral common iliac arteries, and 6 years later he developed multiple organ thromboses with positive lupus anticoagulant and elevated anticardiolipin-β_2GPI complex. He also presented proteinuria, active urinary sediments, lymphocytopenia, thrombocytopenia, and positive antinuclear antibodies. These symptoms were suggestive of systemic lupus erythematosus (SLE), but they did not fulfill the 1982 revised American Rheumatism Association classification for SLE. We therefore diagnosed APS with "lupus-like" diseases.[1] The initial and insidious thromboses occurred in large vessels in our patient in contrast to most cases of APS which involve small or medium-sized vessels.[1–3] However, we did then believe that he had APS because of the prolonged APTT and the absence of risk factors for hypercoagulability. He remained asymptomatic off anticoagulation despite evidence of progressive occlusion of his abdominal aorta on this current admission. This is probably due to the development of collateral circulation. What remains unclear is the triggering event that led to a cascade of multifocal small-vessel thromboses.

The active thrombotic events concurred with the onset of chondritis in this patient. Because his chondritis subsided after treatment with corticosteroids, which had been administered immediately, it was impossible to know whether the chondritis occurred in the context of APS or was the first symptom of forthcoming relapsing polychondritis coexisting with APS.

Chondritis was not mentioned as an extravascular feature of APS in several large-scale clinical studies.[1,3,4] Chondritis or relapsing polychondritis is seen in fewer than 1% of patients with SLE.[5–7] On the other hand, arterial and venous thrombosis in relapsing polychondritis is not rare, and is usually attributed to underlying vasculitis,[8–10] unlike thrombosis in APS without vasculitis.[2,11] However, thrombosis in the absence of vasculitis in a patient with relapsing polychondritis was found to have lupus anticoagulant.[12,13] In addition, the presence of antiphospholipid antibodies and/or lupus anticoagulant without thrombosis is detected in

some patients with relapsing polychondritis, and those antibodies are suggestive of the coexistence of SLE or APS.[6,14] As a consequence, chondritis accompanied by APS is rare but is possible.

As the active thrombotic events concurred with chondritis, and both responded well to the high dose of corticosteroids in our patient, we cannot exclude the possibility that the inflammatory aspect of chondritis may have contributed to the triggering event that led to a cascade of multifocal small-vessel thromboses in APS. The instigation of low-grade vascular inflammation is suggested to have occurred in the early stage of APS,[15] and therefore we suggest that in the treatment of APS, especially when associated with an inflammatory rheumatic disease such as chondritis, pulse therapy with high-dose corticosteroids should be considered.

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