

Infective Endocarditis Presenting as Deep Vein Thrombosis and Symmetric Peripheral Gangrene

Ritik Katiyar*, Gargee Rattan*, Sandeep**, S Anuradha***



Fig. 1: Acral gangrene in all 4 limbs.

A 34 year-old man presented with fever, dyspnoea, heart failure, severe sepsis, septic shock and blackish discolouration of all 4 limbs suggestive of symmetric peripheral gangrene (SPG). Arterial doppler confirmed thrombosed vessels (both arteries and veins) of lower limbs. 2D ECHO showed rheumatic heart disease with moderate mitral stenosis and mitral regurgitation with vegetation over

anterior mitral leaflet. Two blood cultures grew *Acinetobacter baumannii*. Patient went into sudden cardiac arrest on day 3 of admission and died despite antibiotics and anticoagulation.

SPG presents as symmetrical gangrene of two or more extremities due to microcirculatory thrombosis, without large vessel-obstruction or vasculitis. Fingers, and toes (rarely nose, ear lobes or genitalia) are affected. It manifests unpredictably in conditions associated with sepsis, low output states, vasospastic conditions, myeloproliferative disorders or in hyperviscosity syndrome. Disseminated intravascular coagulation has been implicated as the final common pathway in the pathogenesis and it carries a mortality rate upto 35 - 40%. There is failure of the natural anticoagulant systems, both the protein C system (crucial for down-regulating thrombin generation in the microvasculature) and the antithrombin system due to hepatic dysfunction or failure (shock liver), since the liver synthesizes protein C (a vitamin K-dependent anticoagulant) and antithrombin. This produces a procoagulant state which causes small vessel occlusion and SPG. Owing to this severe procoagulant state, large vessel obstruction may also ensue. Deep vein thrombosis (DVT) predisposes to micro-thrombosis in limbs due to decreased blood flow and/or direct contiguous extension of thrombosis. Thus, our patient appears to have developed SPG (sepsis, hypotension resulting in shock liver, hypercoagulable state) together with presence of DVT in lower limbs with ischaemic necrosis. He developed a greater degree of ischaemic injury in the limbs affected by DVT, indicating that concomitant DVT can modulate the clinical course of SPG.

***Post-Graduate Resident, **Senior Resident, ***Director Professor, Department of Medicine, Maulana Azad Medical College and Lok Nayak Hospital, New Delhi - 110 002.**

Corresponding Author: Dr S Anuradha, Director Professor, Department of Medicine, Maulana Azad Medical College and Lok Nayak Hospital, New Delhi - 110 002. Phone: 9968604279, E-mail: drsanuradha@gmail.com