Bone Marrow Histology in a Patient with Fever of Unknown Origin

ANDREAS HOLBRO, MD, Department of Internal Medecine; STEPHAN DIRNHOFER, MD, Professor, Institute of Pathology, University Hospital Basel, Basel; PHILIP WENT, MD, Institute of Pathology, Stadtspital Triemli, Zürich; ALAN TYNDALL, MD, Professor; THOMAS DAIKELER, MD, Department of Rheumatology, University Hospital Basel, Basel, Switzerland. Address reprint requests to Dr. A. Holbro, Department of Internal Medicine, University Hospital Basel, Petersgraben 4, CH-4031 Basel, Switzerland. E-mail: aholbro@uhbs.ch

A 48-year-old man presented with fever, night sweats, weight loss of 4 kg, and myalgia. He was in poor general condition, with fever (38.8°C) and elevated blood pressure (145/90 mm Hg). Further clinical examination was unre-

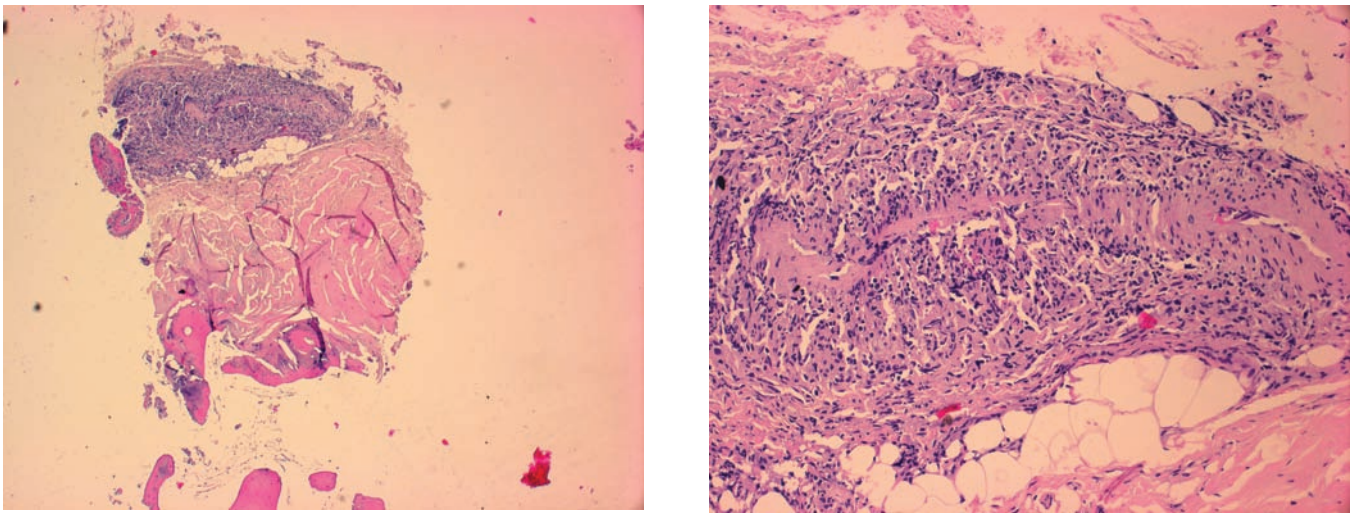

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Figure 1. A. Transmural necrotizing inflammation of a medium-size muscle artery in the pericortical soft tissue (H&E ×50). B. Higher magnification shows dense infiltration of polymorphic nucleated granulocytes, eosinophilic granulocytes, mononuclear cells, and fibrinoid necrosis of vessel wall (H&E ×200).

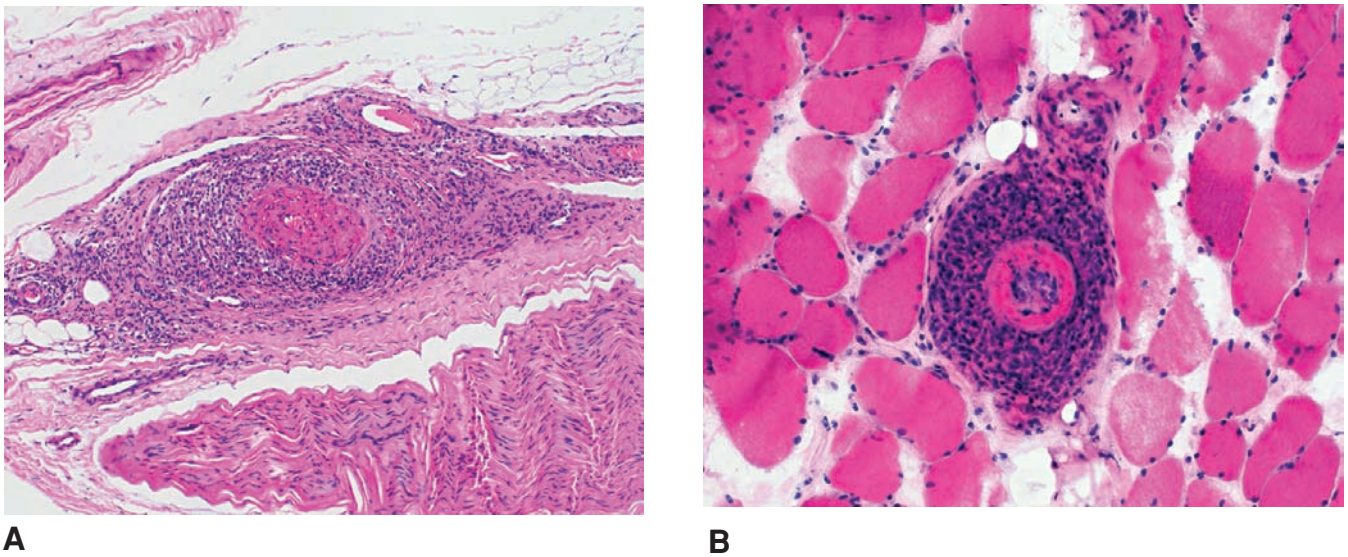

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Figure 2. A. Panoramic view of the nerve biopsy shows transmural necrotizing inflammation of an arterial wall (H&E ×50). B. Muscle biopsy shows circular destruction of the vessel wall by infiltration of polymorphic nucleated granulocytes, eosinophilic granulocytes, and mononuclear cells. In addition there is fibrinoid necrosis and complete occlusion of the lumen (H&E ×200).

markable. Laboratory values were normal, apart from mild anemia, leukocytosis, and elevated C-reactive protein (134 mg/l). Investigation for infection and malignancy remained negative. Because of persistent fever, diagnosis of fever of unknown origin (FUO) was made. Diagnostic investigation for FUO included a bone marrow trephine. Seven days later, peroneal paresis of the right foot occurred. The same day, the results of bone marrow histology were obtained, showing transmural necrotizing inflammation of a medium-size muscle artery in the pericortical soft tissue (Figure 1). On the basis of the history and clinical findings, polyarteritis nodosa (PAN) was diagnosed and immunosuppression was initiated. A biopsy of the right superficial peroneal nerve combined with a muscle biopsy confirmed vasculitis of small and medium-size arteries and was also consistent with the diagnosis of PAN (Figure 2).

This is the first report in which diagnosis of PAN was histologically confirmed by bone marrow biopsy performed for diagnostic evaluation of FUO.

Vasculitides are one of the prevalent causes of FUO[1,2], and FUO can be the initial presentation of PAN[3]. Although it is rare, PAN should always be considered as a cause of FUO, because it is a life-threatening disease with poor prognosis if untreated.

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