Images in Cardiology

This section edited by Edward A. Geiser, M.D.

Constrictive Pericarditis

ANDREW FARB, M.D., JOSEPH M. KIERNAN, M.D.,* ROBERT B. WALLACE, M.D.†

Department of Cardiovascular Pathology, Armed Forces Institute of Pathology, Washington, D.C., *Fairfax Hospital, Falls Church, Virginia, and the †Division of Cardiothoracic Surgery, Georgetown University Medical Center, Washington, D.C., USA

FIG. 1 Cardiac catheterization and autopsy findings in constrictive pericarditis. See text for explication.

A 50-year-old man presented with a 3-month history of worsening dyspnea on exertion, pedal edema, and right-sided pleuritic chest pain. Marked jugular venous distention, scant right basilar pulmonary rales, a pericardial knock, and severe lower extremity edema were present on physical examination. At cardiac catheterization, simultaneous left and right heart pressure measurements revealed elevation and equalization of the left ventricular diastolic pressure with right atrial pressure, right ventricular diastolic pressure, and pulmonary capillary wedge pressure (Fig. 1, A–C). Right and left ventricular diastolic pressure tracings demonstrated an early diastolic dip followed by a plateau (Fig. 1B). Cardiac index was reduced to 1.3 l/min/m². The patient died shortly after pericardial biopsy. At autopsy, the parietal pericardial surface of the heart consisted

of numerous large bulky tan-white and firm tumor nodules (Fig. 1D). On sectioning, the tumor encased all four cardiac chambers (Fig. 1E). Histology showed a malignant neoplasm consisting of mixed spindle and epithelial components characteristic of malignant mesothelioma.

While this is an unusual diagnosis, the physiology of pericardial constriction (equalization of intracardiac diastolic pressures) is well illustrated by the tumor that surrounds all four cardiac chambers.

Reference

Kaul TK, Fields BL, Kahn DR: Primary malignant pericardial mesothelioma: A case report and review. *J Cardiovasc Surg* 1994;35:261–267