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Cotton Fiber Intraarterial Granuloma After Cardiac Catheterization

To the Editor:

An open lung biopsy obtained during evaluation of a patient with pulmonary hypertension revealed an unusual finding.

A 68-year-old man presented with atypical chest discomfort, disabling dyspnea, and hypoxemia out of proportion to his moderate obstructive pulmonary disease. Pulmonary hypertension was confirmed at cardiac catheterization. A thorough evaluation did not reveal pulmonary thromboembolic disease, obstructive lung disease, interstitial lung disease, inhalation or hypersensitivity disease, collagen vascular disease, or chronic pulmonary venous hypertension. Therefore, we were concerned with other, less common disease processes such as primary pulmonary hypertension, amyloidosis, vasculitis, veno-occlusive disease, or arterial tumor embolus. Open lung biopsy did not verify any of the above, but showed a mild granulomatous interstitial pneumonitis suggestive of hypersensitivity pneumonitis. Additionally, an intra-arterial granulomatous reaction to ahirefringent material identified as cotton fibers was noted (Fig 1).

The discovery of intra-arterial cotton fiber emboli and associated granulomatous arteritis was unexpected. Previous experimental work with animal (guinea-pig) models of cotton fiber emboli describe the histopathology as "resembling the arteritis of hypersensitivity", as seen in our patient. A wide variety of materials (including cotton fibers) cause foreign body emboli when introduced into the vascular system. Although rarely reported in human subjects, cotton fiber emboli were documented following cardiac catheterization in a patient with pre-existing pulmonary hypertension. That report led to discontinuing the practice of placing cardiac catheters between layers of gangue tissue during sterilization, which can leave cotton wool fibers on catheters. Cotton fibers can still come into contact with the catheter from touching cotton pads during the procedure or during passage through skin sterilized with cotton swabs. We presume that one of these mechanisms was responsible for the introduction of cotton fibers into the pulmonary artery in our patient. Recognition and elimination of these potential avenues of contact will help limit the development of cotton fiber emboli following cardiac catheterization.

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Curtailment of Cardiac Reserve in Mitral Valve Prolapse

To the Editor:

According to the cardiomypathic theory for the pathogenesis of mitral valve prolapse, a diminished cardiac reserve may occur in this disorder, even in the absence of significant atrioventricular regurgitation. Left ventricular dysfunction is not usually detected under baseline condition, but could be revealed under the effect of.