HEART & LUNG

Case Studies

Spontaneous healing of posttraumatic focal coronary aneurysm: A case report

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ABSTRACT

We report on the spontaneous healing of a posttraumatic focal coronary aneurysm in a previously healthy 61-year-old man after his involvement in a motor vehicle accident, resulting in blunt chest trauma that injured the anterior wall of his left ventricle.

Left-sided cardiac catheterization and selective coronary angiography 1 month after the accident showed an aneurysm in the proximal part of the left anterior descending artery, and normal coronary arteries otherwise. Intravascular ultrasound revealed that the lesion was a pseudoaneurysm protruding toward the myocardium.

Surgical removal of the aneurysm was not considered, and the patient was discharged after 2 months of uneventful hospitalization. Follow-up coronary angiography and intravascular ultrasound at 3 months and 1 year after the accident showed a total regression of the aneurysm. The patient has remained asymptomatic, with no residual ischemia 3 years after the accident.

This case indicates that careful conservative treatment is a therapeutic option for posttraumatic coronary pseudoaneurysms.

Cardiac injuries from nonpenetrating chest traumas involve a wide spectrum of manifestations, from asymptomatic myocardial contusions to severe structural and fatal damage.[1,2] The formation of aneurysms is an extremely rare outcome of coronary artery injuries from such traumas. Therefore, the prognosis and treatment of traumatic coronary aneurysms remain unelucidated and controversial.

We report on a posttraumatic focal coronary aneurysm in an elderly man with myocardial damage secondary to blunt chest trauma, and we describe the long-term follow-up angiographic and intravascular

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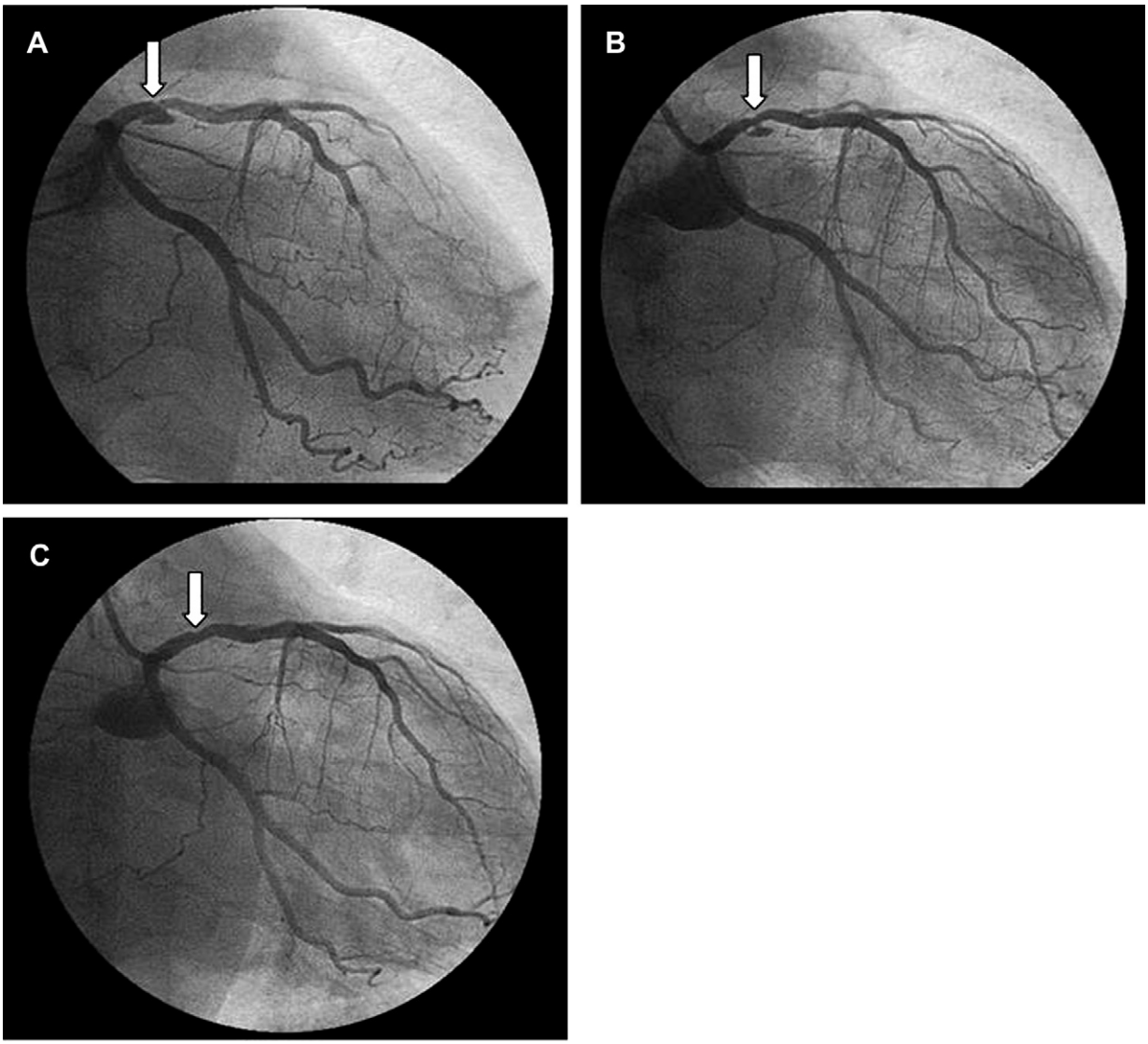

Figure 1 – (A) A coronary angiogram 1 month after the patient's accident indicates a broad-based aneurysm at the proximal part of the left anterior descending artery (arrow). (B) A coronary angiogram 3 months after the accident indicates the regression of the aneurysm (arrow). (C) In a coronary angiogram 1 year after the accident, the aneurysm has completely vanished (arrow). All images are in the right anterior oblique caudal projection.

ultrasound (IVUS) findings that indicated the spontaneous healing of his lesion.

Case Report

A previously healthy 61-year-old man was admitted to the emergency department of our hospital immediately after a road accident in which his chest had suffered impact against the steering wheel. Physical examination on arrival revealed a blood pressure of 110/72 mm Hg, a pulse rate of 80/minute, and a respiratory rate of 22/minute. An area of contusion was evident over the left sternal border. Auscultation of the lungs yielded normal findings. The patient had normal first and second heart sounds, with no cardiac murmurs. Chest radiography showed a slightly enlarged heart, with multiple fractures of the third, fourth, and fifth left anterior ribs. An electrocardiogram (ECG) on admission produced normal results, except for poor R-wave progression in the chest leads. Because of intermittent, nonspecific chest pain, another ECG was performed on day 6 of hospitalization. It showed a negative T-wave in the left chest leads. Echocardiography revealed an area of severe hypokinesia in the anterior apical walls, with a mildly pericardial echo-free space around the heart.