this contact was made by breathing. The second argument for the responsibility of inhaled antigens is the demonstration of numerous actinomyces in the patient’s lung biopsy specimen.

In CSA, etiologic and precipitating factors are not determined in most cases and only rare publications suggest that vaccination or desensitization could be factors triggering the vasculitis. The disease occurs in asthmatic patients and the antigen responsible for the respiratory disease could be inhaled. In other vasculitides such as Wegener’s granulomatosis, the occurrence in patients who had inhaled wood particles advocates the responsibility of an inhaled antigen.

We suggest, therefore, that inhaled antigens should be considered as possible etiologic factors for systemic vasculitis with respiratory manifestations.

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False Aneurysm of the Left Ventricle due to a Penetrating Chest Wound*

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A 24-year-old white man had a knife chest wound, and four months after this event, manifested progressive dyspnea. A false aneurysm of the left ventricle was diagnosed by 2D echocardiogram. Surgical resection of the aneurysmal sac with closure of the orifice of the lateral wall of the left ventricle was performed successfully.

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Among the heart injuries due to penetrating chest traumas are those secondary to perforation of the pericardium

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and myocardium in a variety of manners. They include internal bleeding and hemopericardium with or without the development of tamponade.

In this report, we describe an unusual delayed complication of a penetrating wound of the heart manifested as a false aneurysm of the left ventricle.

CASE REPORT

A 24-year-old white male farmer, without any important past medical history, during a fight received a knife stab wound on the lateral wall of the left hemithorax in the sixth left intercostal space at the middle axilar line. The patient received first aid in a primary level clinic where a chest tube for pneumothorax was installed. After that, the patient apparently recovered and refused further management. However, four months later, he started complaining of progressive shortness of breath for which he was referred to a third level hospital for further work-up.

On physical examination, the patient was conscious and hemodynamically stable. The blood pressure was 110/70 mm Hg; regular pulse at 100 per minute; respirations, 26 per minute with no fever. Ears, nose, and throat were normal. Carotid pulses were regular bilaterally. No jugular distention was present. Pulmonary lung fields were clear. Pulse of maximal intensity was localized at the fifth to sixth left intercostal space at the middle clavicular line with paradoxical impulse. A soft continuous murmur grade 2/6 was heard at the fourth left intercostal space at the middle clavicular line. The rest of the physical examination was unremarkable.

Laboratory results, which included CBC, SMA 12, serum enzymes, and electrolytes as well as urinalysis, were within normal limits. Resting electrocardiogram showed sinus tachycardia, 100 per minute, with subepicardial ischemia on the lateral wall of the left ventricle (LV). Cardiac x-ray series presented an increased transversal heart diameter at the expense of the lateral wall of the LV (Fig 1). The M-mode echocardiogram with Doppler detected a false aneurysm of the left ventricle, inside of which several small thrombi were observed, as shown in Figure 2. The patient was operated on. The false aneurysm formed by the same pericardial sac was resected and the orifice of the lateral wall of the LV was closed. He recovered completely without any further complications.

Figure 1. Chest x-ray film in which the cardiothoracic ratio (0.60) is increased due to the bulkiness of the pericardial sac on the lateral wall of the left ventricle.

Figure 3. Spore of Actinomyces thermophilus in cytoplasm of a histiocyte.

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DISCUSSION

Heart injuries secondary to a penetrating chest trauma are diverse depending upon the mode, sight, and size of the lesion, and particularly, the state of the pericardial wound. Such injuries that might affect various anatomic regions include perforation of the heart which can lead to internal bleeding and death if surgical intervention is not instituted as soon as possible. When there is an intrapericardial hemorrhage with sealed pericardial wound, cardiac tamponade is the major danger. On the other hand, when the pericardial wound is open and bleeding occurs freely into the pleural space, loss of circulating blood volume would be the main threat. We present a case with perforation of both the pericardium and the lateral wall of the LV, in which the same hemopericardium formed a clot that was capable of sealing inside the pericardium creating a cavity within itself, and because it communicated to the LA, the patient did not develop a tamponade. Moreover, this false aneurysm, which filled during systole and emptied in diastole, maintained the patient in stable condition, allowing him to perform his work as a farmer for four months until he started to decompensate hemodynamically.

To our knowledge, this case represents a rare complication that should be considered when evaluating penetrating wounds of the heart.

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