Continuous Murmur as a Sequel of Augmented Collateral Circulation in Suppurative Lung Disease: Report of Three Cases

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Three adult men with bronchiectasis presented with continuous thrill and murmur over the chest and wide pulse pressure. One had visible collaterals in the chest wall and neck. These signs are the result of augmented pulmonary collateral circulation, demonstrated by aortography and pulmonary angiography. Such a clinical presentation has not been reported, in suppurative lung disease. Reversal of blood flow in the main pulmonary artery seen in two patients is rare.

The systemic collateral circulation to the lungs is increased in suppurative lung diseases. Three patients with bronchiectasis, who presented with a continuous thrill and murmur and wide pulse pressure due to augmented collateral circulation, are reported. One patient had, in addition, visible collateral vessels in the chest wall and neck. We are not aware of similar case reports in the literature.

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FIGURE 1. Retrograde aortogram demonstrating profuse systemic arterial circulation of the right lung.

CASE REPORTS

CASE 1

A 35-year-old man was hospitalized for cough with profuse, foul-smelling expectoration of two years' duration. He had had small bouts of hemoptysis for one year. He had clubbing of fingers and toes. Pulse was collapsing. There were pulsating tortuous vessels in the right supraclavicular region and right interscapular region. Mediastinum was shifted to the right. Medium rales were heard all over the right hemithorax. A continuous thrill and murmur were found in the right supraclavicular and infracavicular regions. Heart sounds were normal. Investigations revealed the following: blood pressure 140/80 mm Hg; sputum—negative for tubercle bacilli; Neisseria catarrhalis and nonhemolytic Strep- tooccus were grown. Roentgenogram of the chest revealed irregular opacity over the right lung zones. Bronchogram showed cystic bronchiectasis in the right lung and left upper lobe. Aortogram showed branches from tortuous and dilated internal mammary, lateral thoracic, intercostal and other vessels, entering the right lung (Fig 1). The contrast medium, after opacifying the lung, filled the right pulmonary artery in a retrograde fashion and proceeded toward the left hilum. Pulmonary angiography showed that all the contrast entered the left pulmonary artery confirming reversal of blood flow in the patent right pulmonary artery (Fig 2).

Surgery was not undertaken in view of bilateral bronchiectasis.

CASE 2

This 45-year-old man had cough with profuse foul-smelling expectoration and exertional dyspnea of five months' duration. He had had small bouts of hemoptysis, as well as clubbing of fingers and toes. Pulse was collapsing. Bronchial breath sounds and rales were heard over the right supraclavicular, infracavicular and suprascapular regions. A continuous thrill and murmur were present in the right supraclavicular and infracavicular regions. Investigations revealed blood pressure 128/80 mm Hg; sputum—negative for tu-
Recurrent Ventricular Tachycardia
Successfully Treated by Excision of Ventricular Aneurysm

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Two patients with recurrent ventricular tachycardia unresponsive to medical therapy but successfully treated by excision of a ventricular aneurysm are described. Intractable ventricular tachycardia in the postmyocardial infarction patient should alert the physician for the presence of ventricular aneurysm. Recurring ventricular tachycardia may be considered a primary indication for aneurysmectomy in such cases even in the absence of congestive cardiac failure and systemic embolization.

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REFERENCES

Discussion

These three men patients had the following features in association with signs and symptoms of bronchiectasis: 1) wide pulse pressure, 2) continuous thrill and murm. One patient had, in addition, visible collateral vessels in the chest wall. These are attributed to the presence of augmented pulmonary collateral circulation, demonstrated by aortography and pulmonary angiography.

The occurrence of continuous murm due to augmented collateral circulation in congenital cyanotic heart disease is a well established fact. However, to our knowledge, there has been no report of patients with suppurative lung disease presenting with a continuous thrill and murmur, wide pulse pressure, and visible collaterals, as a sequel of augmented collateral circulation. The disappearance of the murm and thrill in the third case, associated with clinical and radiologic evidence of control of infection, is of interest. It is presumed that the arterial shunts are functionally closed when the infection is controlled.

Case 3

This man, age 52, had cough with expectoration for one year. There had been no hemoptysis. He had been given antituberculosis chemotherapy for three months. Sputum examination had been negative for tubercle bacilli. He had clubbing of fingers and toes. Pulse was collapsing. Bronchial breath sounds and rales were present over the right supraclavicular, infraclavicular and suprascapular regions. There was a continuous thrill and murmur in the right infraclavicular region. Investigations revealed the following: blood pressure 130/80 mm Hg; sputum-negative for tubercle bacilli; nonhemolytic Streptococcus and coliform organisms were grown. Roentgenogram of the chest revealed an irregular opacity in the right upper zone. Bronchogram showed bronchiectasis in right upper and middle lobes. Truncus anterior of the right pulmonary artery and the right superior pulmonary vein were not visualized in the pulmonary angiogram. Retrograde transfemoral aortogram showed pooling of the contrast in the right upper zone and its subsequent entry in a retrograde direction into the right pulmonary artery through the truncus anterior. The upper and middle lobes were resected. There were dense vascular adhesions over these lobes. Bronchiectatic changes and normal patent branches of the pulmonary artery were noted in the specimen. The thrill and murmur disappeared after lobectomy.

Figure 2. Dextro angiocardiogram indicates reversal of blood flow in the right pulmonary artery.

Figure 3. Radiograph of the chest after lobectomy.