

Left Cor Triatriatum in an Adult Diagnosed by Transthoracic Echocardiography

Clinical Case Portal

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Case Report

A case of left *cor triatriatum* in a 55 years old man is presented.

Patient history prior to current observation :

The patient was admitted to hospital with chest pain and palpitations of sudden onset. The ECG showed atrial fibrillation with normal ventricular response. There was no previous history of heart disease or cardiac symptoms.

Clinical findings on admission, evolution and outcome :

Transthoracic echocardiogram fig. 1, fig. 2, fig. 3, fig. 4 showed left atrial enlargement. A thin membrane divided the left atrium into two chambers, an upper and a lower one. Flow between these two left atrial chambers could be shown by colour Doppler imaging. The left ventricle was normal, as was its function. The aortic valve was normal but there was mild tricuspid regurgitation with a gradient between the right ventricle and the right atrium of about 23 mmHg.

Transoesophageal echocardiography fig. 5, fig. 6, fig. 7, fig. 8, fig. 9, fig. 10 showed that the membrane crossed the left atrium from the inferior border of the foramen ovale to the base of the left atrial appendage; some auto-contrast in the upper chamber was seen. The flow between the two chambers

was easily demonstrated in the 4-chamber view. A gradient between the chambers of about 6.25 mmHg was documented, enabling the calculation of a communication orifice of 1.1 to 1.3 cm². The patient refused any surgical treatment and remained in atrial fibrillation. This was controlled with digoxin, but anti-coagulation was also declined.

Discussion

In classical cor triatriatum a membranous partition separates the more proximal chamber, that receives the pulmonary veins, from the more distal left atrium, that communicates with the left ventricle through the mitral valve. The communicating orifice between the two atrial chambers ranges from less than 3 mm to about 1 cm in diameter. This anomalous septum contains cardiac muscle fibres and is occasionally calcified. The onset of symptoms is usually within the first few years of life.

Nonetheless, a number of patients are asymptomatic until the second or third decade. The echocardiogram allows non invasive diagnosis. The typical electrocardiographic feature is systolic overload of the right ventricle. This was not observed in the present case. On ECG, right atrial hypertrophy results in tall, peaked P waves and broad, notched, P waves are present in some cases, presumably as a consequence of the dilated accessory atrial chamber, but are absent in others.

Conclusion

Our patient presented in atrial fibrillation. In this particularly case, the patient remained asymptomatic until 55 years of age and the first manifestation was the aforementioned arrhythmia. He had no signs or symptoms of pulmonary hypertension.

References

1. Alexander Dobbertin, Carole A. Warnes : Cor Triatriatum in an adult diagnosed by transesophageal echocardiography.
Journal of the American Society of Echocardiography November-December; 952 – 957.

Video 1 :

[Left Cor Triatriatum in an Adult ETT Parallax](#)



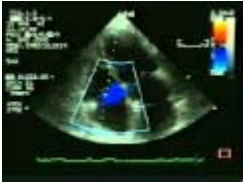
Video 2 :

[Left Cor Triatriatum in an Adult ETT Ap4ch](#)



Video 3 :

[Left Cor Triatriatum in an Adult _ETT_ Tricuspid regurgitation](#)



Video 4 :

[Left Cor Triatriatum in an Adult _ETT_ Ap4ch](#)



Fig. 1 :

[Left Cor Triatriatum in an Adult _TOE_ Four chamber view - 1](#)



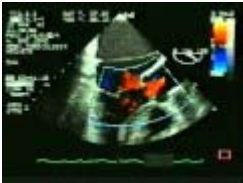
Video 5 :

[Left Cor Triatriatum in an Adult _TOE_ Four chamber view - 2](#)



Video 6 :

[Left Cor Triatriatum in an Adult _TOE_ View of the aortic valve](#)



Video 7 :

[Left Cor Triatriatum in an Adult _TOE_ Another view of the left atrial membrane](#)



Video 8 :

[Left Cor Triatriatum in an Adult TOE Colour flow Doppler analysis](#)



Fig. 2 :

[Left Cor Triatriatum in an Adult TOE Calculation of the communication orifice between the atrial chambers](#)

