GIANT LEFT ATRIUM WITH MECHANICAL MITRAL PROSTHESIS, SMALL PARAVALVULAR LEAK AND DISLOCATED PACEMAKER ELECTRODE

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Giant left atrium (GLA) is defined as those measuring larger than 8 cm and are typically found in patients who have rheumatic mitral valve disease with severe regurgitation. GLA is a rare condition, with a reported incidence of 0,3%.The patient usually presents with complaints of shortness of breath and/or dysphagia. The correct diagnosis of GLA is at times not possible through the routine chest roentgenogram and may require echocardiography, computerized tomography or cardiac MRI to reach a diagnosis. GLA is associated with complications such as heart failure, valvular heart disease, dislocations of electrode. Patients with GLA are candidates for surgical/catheter interventional treatment at any age.

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Key words: giant left atrium, mechanical mitral prosthesis, paravalvular leak, dislocated pacemaker electrode, echocardiography.

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ГИГАНТСКОЕ ЛЕВОЕ ПРЕДСЕРДИЕ С МЕХАНИЧЕСКИМ МИТРАЛЬНЫМ ПРОТЕЗОМ, НЕБОЛЬШОЙ ПАРАВАЛЬВУЛЯРНОЙ НЕСОСТОЯТЕЛЬНОСТЬЮ И СДВИГОМ ЭЛЕКТРОДА КАРДИОСТИМУЛЯТОРА

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Гигантское левое предсердие (ГЛП) определяется как сумма измерений превышающая 8 см и обычно встречаются у больных, имеющих ревматическое поражение митрального клапана с тяжелой регургитацией. ГЛП — это редкое состояние, с документированной встречаемостью 0,3%. Больной, как правило, жалуется на одышку и/или дисфагию. Правильный диагноз ГЛП порой не представляется возможным по рутинной рентгенограмме грудной клетки, и может потребоваться эхокардиография, компьютерная томография или МРТ сердца, чтобы достичь точного диагностического результата. ГЛП связано с осложнениями, такими как сердечная недостаточность, пороки сердца, сдвиги электрода. Пациенты с ГЛП являются кандидатами для хирургического/катетер оперативного вмешательства в любом возрасте.

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Ключевые слова: гигантское левое предсердие, митральный механический протез, паравальвулярная несостоятельность, сдвиг электрода кардиостимулятора, эхокардиография.

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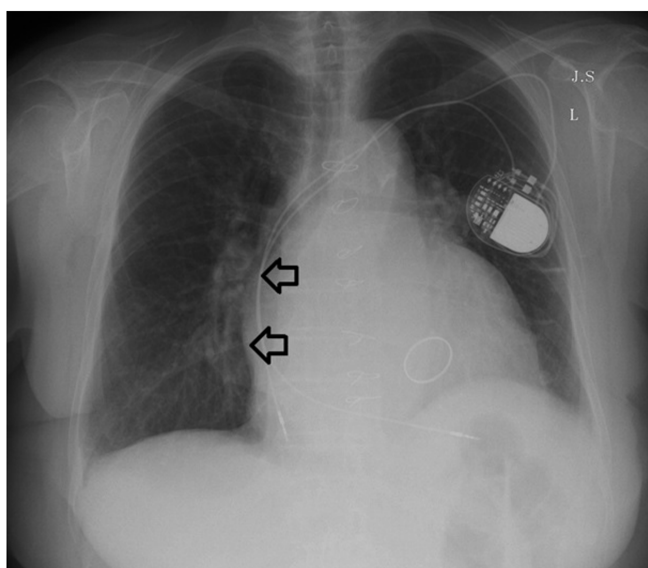

Figure 1. Chest radiograph in the antero-posterior view revealing marked prominence of the right cardiac border (arrowheads) consistent with left atrial enlargement.

Giant left atrium is a rare disease, with a reported incidence of 0,3%, defined as left atrium dimension larger than 8 cm. The disease is typically found in patients with rheumatic mitral valve disease [1-3]. Late electrode displacement, occurring after the first six weeks post implantation is rare and remarkable [4].

A 83-year-old female patient was admitted to the Cardiology Ward because of decompensated heart failure. The patient underwent a mitral valve replacement for rheumatic mitral valve disease with St. Jude mechanical prosthesis ten years ago and had performed pacemaker implantation due to atrioventricular conduction disorders. Clinically, at the time of admission, she was conscious, alert, oriented to person, place and time. Her blood pressure was 135/85 mmHg with regular pulse of 85 beats per minute. Heart examination revealed the sharp click of the prosthesis with a grade 2 to 3 pansystolic murmur at the apex. Lung examination showed mild bilateral basal crepitation. ECG showed atrial fibrillation with appropriate right-ventricular pacing.

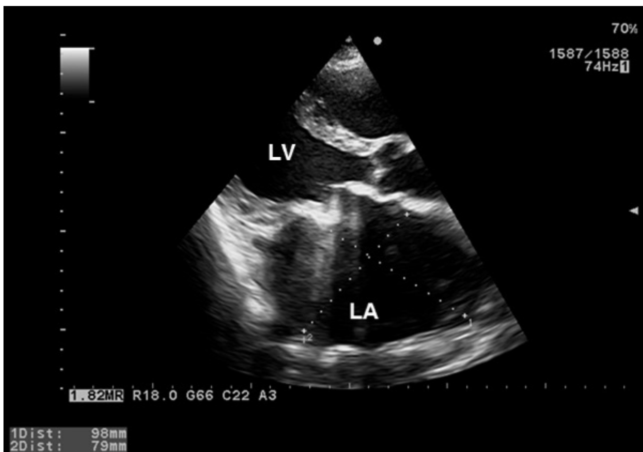

Figure 2. Transthoracic echocardiogram (parasternal short-axis view) of the left atrium (LA).

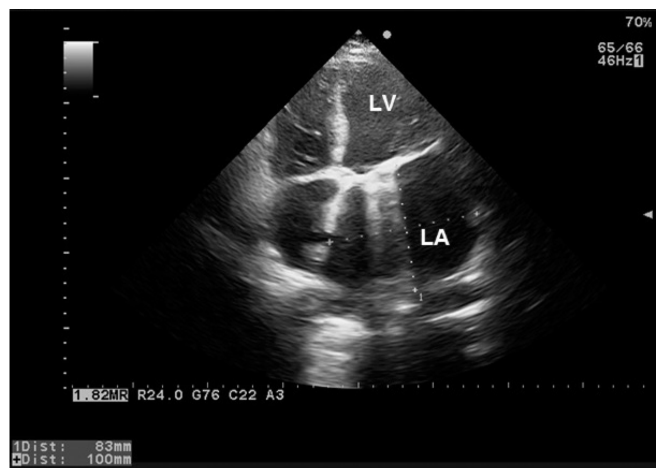

Figure 3. Transthoracic echocardiogram (apical 4-chamber view), showing the disproportionate size of the left atrium (LA) compared with the left ventricle (LV) and the other cardiac chambers.

Chest radiograph in the anterior-posterior view revealed, besides signs of congestion, marked prominence of the right cardiac border (arrowheads) consistent with enlarged left atrium with well-seated mitral valve prosthesis (Figure 1). Furthermore, noticeable was dislocated right atrial electrode with the tip located in inferior vena cava.

Transthoracic echocardiography showed a markedly dilated left atrium diameter — 79 mm (PLAX) (Figure 2), 83x100 mm (A4C) (Figure 3), estimated volume — 71,5 cm^2. The rest ejection fraction was 40%.

A transesophageal echocardiography examination was performed to assess the mitral valve prosthesis and the electrodes. The bileaflet prosthesis was well seated. There was small mitral paravalvular leak in left atrium (Figure 4). Right atrial electrode had no visible vegetation.

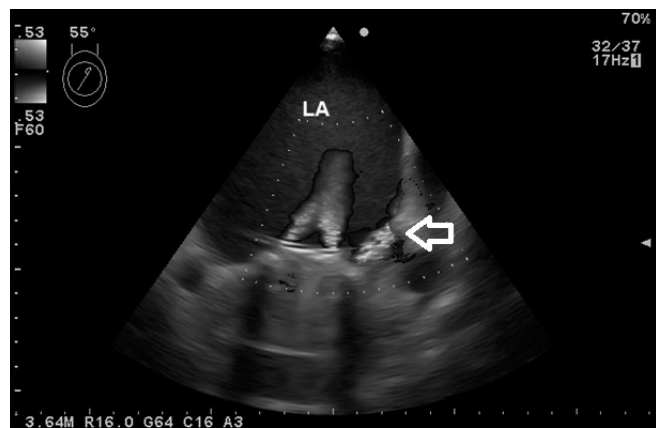

Figure 4. Transesophageal two chamber view demonstrating small mitral paravalvular leak (arrowhead).

A diagnosis of decompensated heart failure with giant left atrium and dislocated right atrial electrode was made. Oral treatment with furosemide, spironolactone and angiotensin receptor blocker was prescribed and warfarin was continued. The patient was scheduled for pacemaker replacement with simultaneous right atrial electrode removal.

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