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Case report

Atypical and severe enlargement of right atrium

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Summary. A 76 year-old woman was admitted to the Emergency Department for recent-onset dyspnea and cough. The electrocardiogram was considered inconclusive. A thoracic X-ray showed global cardiac profile enlargement. Computed tomography, acutely performed in the clinical suspicion of atypical pneumonia/myocarditis or pericardial effusion, showed cardiac enlargement especially of the right chambers. In order to investigate Ebstein's anomaly, pericardial cysts, tumors or other conditions of the right heart a simple transthoracic echocardiogram was performed. Four chambers view showed a giant right atrium aneurysm with moderate tricuspid regurgitation without stenosis or typical Ebstein's echocardiographic pattern.
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Key words: transthoracic echocardiography, right atrium aneurysm, dyspnea

Introduction

Idiopathic enlargement of right atrium is a particular, rare abnormality (1-2) and its etiology (congenital or acquired) is controversial (2). Although many patients were asymptomatic, others present arrhythmia, palpitations, chest pain (3). For this aspecifically clinical presentation the idiopathic enlargement of right atrium/right atrial aneurysm can be confused with other more common conditions that determine cardiac chambers enlargement or heart failure. Usually a chest radiograph is the first diagnostic approach that makes the suspicion of this condition. For its difficult etiological definition and characterization (congenital or acquired) many authors prefer to define it as "idiopathic dilatation of right atrium". We report a case of 76 year-old woman with aspecifical clinical presentation suspected for heart failure. In our case the echocardiographic approach simply reveal the correct diagnosis.

Case report

A 76 year-old woman was admitted to the Emergency Department for recent-onset dyspnea and cough. The electrocardiogram was considered inconclusive, demonstrating pacemaker rhythms. Blood tests were unremarkable. A thoracic X-ray showed global cardiac profile enlargement (Figure 1A: arrows show intracardiac course of pacemaker catheter). Computed tomography, acutely performed in the clinical suspicion of atypical pneumonia/myocarditis or pericardial effusion, showed cardiac enlargement especially of the right chambers (Figure 1B). In order to investigate Ebstein's anomaly, pericardial cysts, tumors or other conditions of the right heart a simple trans-thoracic echocardiogram was performed. Four chambers view showed a giant right atrium (13,2 cm x 10,2 cm) (Figure 1C) with moderate tricuspid regurgitation without stenosis or typical Ebstein's echocardiographic pattern such as displacement of posterior and septal tricuspid

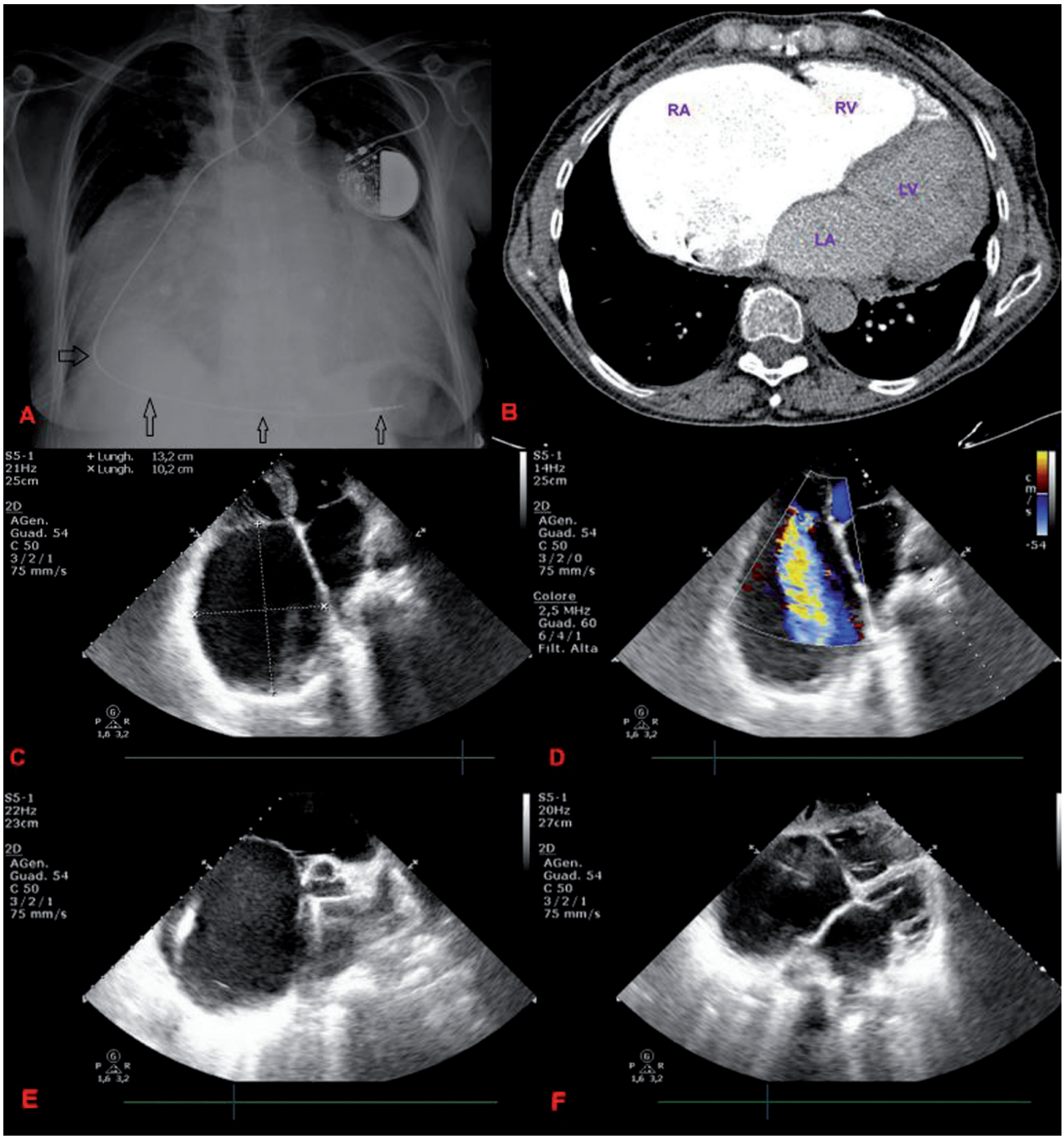

Figure 1. A: A thoracic X-ray showed global cardiac profile enlargement (arrows show intracardiac course of pacemaker catheter). **B:** Computed tomography, acutely performed in the clinical suspicion of atypical pneumonia/myocarditis or pericardial effusion, showed cardiac enlargement especially of the right chambers. **C:** Echocardiographic four chambers view showed a giant right atrium. **D:** Echocardiographic four chambers view showed a giant right atrium with moderate tricuspid regurgitation without stenosis or typical Ebstein's echocardiographic pattern. **E:** Parasternal short axes echocardiogram view confirmed the severe right atrium dilatation disproportionate to the other chambers. **F:** Subcostal echocardiogram view confirmed the severe right atrium dilatation disproportionate to the other chambers

leaflets (Figure 1D). Parasternal short axes echocardiogram (Figure 1E) and subcostal echocardiogram views (Figure 1F) confirmed the severe right atrium dilatation disproportionate to the other chambers without intra-cavitary thrombi.

For the precarious, instable clinical condition of patient we have preferred a conservative menagment improving the current medical therapy. .

Discussion

Right atrial aneurysm/idiopathic dilatation of right atrium may be confused with other conditions characterized by right atrial enlargement (4), such as tumors, Ebstein's anomaly or pericardial cysts. In this way echocardiographic approach, that directly view the cardiac chambers and structures, represent a simple method that can be refine final diagnosis (5), initially suspected by multimodality imaging. The echocardiographic approach offer the advantage to be simple and of plausible use in the clinical practice.

References

1. Qian H, Peng Y, Zhang E. Anatol Echocardiographic diagnosis of an asymptomatic giant right atrial appendage aneurysm. J Cardiol 2015; 15: 9-10.
2. Chatrath R, Turek O, Quivers ES, et al. Asymptomatic giant right atrial aneurysm. Tex Heart Inst J 2001; 28: 301-3.
3. Binder TM, Rosenhek R, Frank H, et al. Congenital malformations of the right atrium and the coronary sinus: an analysis based on 103 cases reported in the literature and two additional cases. Chest 2000; 117: 1740-8.
4. Maione S, Giunta A, Betocchi S, et al. Two-dimensional echocardiography in idiopathic enlargement of the right atrium. Reliability and limitations. Cardiology 1983; 70: 216-22.
5. Siniscalchi C, Gaibazzi N. The "atrial dancing": echocardiographic diagnosis of electrocardiographic query. Acta Bio med 2015; 86: 205-6.

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