

Lack of movement of the cardiac silhouette in fluoroscopy is an early sign of pericardial fluid during catheter ablation: a three-case report

Zanik ruchomości zarysu serca we fluoroskopii jako wczesny objaw płynu w worku osierdziowym podczas ablacji: opis trzech przypadków

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Cardiac tamponade during pulmonary vein isolation remains one of the most frequent and potentially fatal complications. Left anterior oblique (LAO) projections in fluoroscopy can be used to diagnose cardiac tamponade. We demonstrated that careful monitoring of the cardiac silhouette, leading to early detection of pericardial fluid, can reduce the number of cardiac tamponade complications.

A 52 year-old man with persistent atrial fibrillation (AF) underwent a repeat procedure of pulmonary vein isolation (PVI). The patient had a history of paroxysmal AF for 12 years prior to the procedure and persistent AF for 8 months. Shortly after transeptal puncture, lack of movement of the cardiac silhouette (left border) in the LAO 30 projection fluoroscopy image was noticed (Fig. 1). Echocardiography showed approximately 2 mm of pericardial effusion behind the posterior wall. We decided to continue the procedure. Echocardiography, performed 15 min later as a control, showed pericardial fluid levels had increased to 7 mm. We terminated the procedure early due to an increase of pericardial fluid. The patient was stable, with blood pressure of 120/80 mm Hg. Heparin action was reversed with protamine. During 7 days of observation, the patient was stable and required no pericardial drainage.

A 68 year-old man with paroxysmal AF after PVI underwent a repeat procedure because of recurrences of AF and atypical atrial flutter. He had a 2-year history of AF and no other diseases. After transeptal puncture, we noticed lack of movement of the cardiac silhouette in fluoroscopy (LAO 30). Echocardiography imaging revealed approximately 11 mm of pericardial fluid. We terminated the procedure early due to the presence of pericardial fluid. The patient was stable, with blood pressure of 140/90 mm Hg. During 6 days of observation, the patient was stable and required no pericardial drainage.

A 63 year-old woman with a 1-year history of paroxysmal AF underwent PVI. Echocardiography imaging showed decreased global contractility with a left ventricular ejection fraction of approximately 40%. During isolation of the left superior pulmonary vein, lack of movement of the cardiac silhouette in fluoroscopy was observed (LAO 30). Echocardiography imaging showed 4 mm of pericardial effusion behind the posterior wall. We completed PVI (control echocardiography was performed every 15 min). There was no change in pericardial fluid levels. The patient was heparinised according to activated clotting time measurements. The patient was discharged 2 days after ablation with sinus rhythm and a small amount of pericardial fluid.

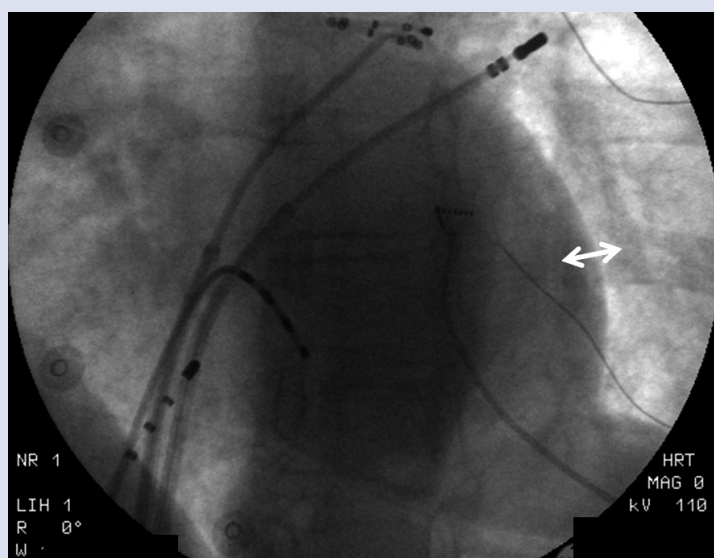


Figure 1. LAO 30 projection. Lasso and ablation catheters are in the left pulmonary veins. Arrows show direction of normal movement of the left border of the cardiac silhouette

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