Phrenic nerve injury after catheter ablation: should we worry about this complication?

INTRODUCTION: Phrenic nerve injury (PNI) is a complication that can occur with catheter ablation. METHODS: Data from 17 patients with PNI following different catheter ablation techniques were reviewed. PNI was defined as decreased motility (transient) or paralysis (persistent) of the hemi-diaphragm on fluoroscopy or chest X-ray. Patient’s recovery was monitored. Normalization of chest images and sniff test would be considered as complete clinical recovery. RESULTS: Out of the 17 PNI patients (16 right, 1 left), 13 (11 persistent, 2 transient) occurred after pulmonary veins isolation with or without superior vena cava ablation. Three patients had persistent PNI after sinus node modification and one other patient experienced PNI after epicardial ventricular tachycardia ablation. Ablation was performed with different energy source including radiofrequency (n = 13), cryothermal (n = 1), ultrasound (n = 2) and laser (n = 1). Patient’s symptoms varied broadly from asymptomatic to dyspnea, and even to respiratory insufficiency that required temporary mechanical ventilation support. Two patients with transient PNI resolved immediately after the procedure and the other 15 persistent PNI patients resolved within a mean time of 8.3 +/-
6.6 months. CONCLUSIONS: PNI caused by catheter ablation appears to functionally recover over time regardless of the energy sources used for the procedure.