■ S-229 ■

Uncomplicated Superior Vena Cava Perforation during Pacing Lead Insertion

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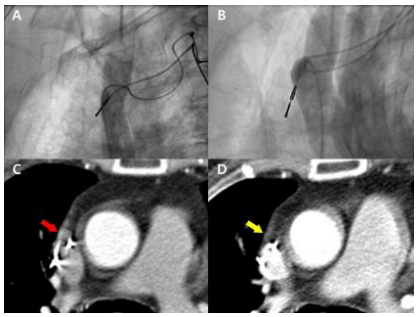
Background: Permanent pacemaker implantation can cause serious complication like vascular perforation during lead insertion procedure. Perforation of the great vessels can cause pericardial effusion and cardiac tamponade and it is usually known to be caused by a screw type active-fixation lead. We present a unique case of great vessel perforation by a tined passive-fixation lead during transvenous pacemaker lead implantation. **Case report:** A 82-year-old female presenting dizziness was admitted to our hospital with a diagnosis of complete AV block. We performed permanent pacemaker implantation. During a tined atrial lead positioning, the lead was extended outside the SVC wall for a while, with no known-cause. We thought that the lead was introduced inside the minor branch of SVC. However, CT scan which was performed after successful pacemaker implantation, revealed that the tined lead penetrated the SVC wall and it caused focal hematoma in mediastinum. The patient's condition was good throughout the whole procedure and discharged home without any complication on the 7th hospital day. On follow-up CT scan, decrease in focal hematoma was noted. Although it has been known that only a screw type active-fixation lead cause vascular perforation, we experienced SVC perforation by a tined passive-fixation lead which has blunt end. Thus, we suggests that special concern is also needed when a tined lead is inserted. We report this case because,to the best of our knowledge, it is the first report of great vessel perforation by a tined pacing lead.



■ S-230 ■

A case of takotsubo cardiomyopathy caused by severe hyponatremia with underlying coronary artery-left ventricular fistulae

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Background: Takotsubo cardiomyopathy is characterized by transient LV wall motion abnormality without coronary artery disease. It can be triggered by medical illness. Meanwhile, coronary fistulae are anomalous connection between coronary arteries and cardiac chambers or other vessels and are known to be generally asymptomatic, but rarely manifested by myocardial ischemia due to coronary steal syndrome. We report a unique case of takotsubo cardiomyopathy due to severe hyponatremia with coronary-LV fistulae. **Case report:** A 65-year-old female was referred to our hospital with the impression of AMI. Severe hyponatremia and elevated troponin-I with ST elevation on ECG was noted. Coronary angiography revealed multiple coronary fistulae originating from the diagonal branch of LAD and draining into LV cavity without any other coronary lesion. Echocardiography showed multiple linear flow signals from epicardium to endocardium at apical lateral wall, suggesting multiple coronary-LV fistulae. Her condition was recovered after conservative management. The follow-up echocardiography showed normal LV wall motion and systolic function. Doppler echocardiography revealed the decreased CFR in both coronary artery and fistula. Those suggest that the myocardium is susceptible to ischemia due to decrease in CFR, which may be associated with coronary fistula. Though we cannot conclude that coronary fistula contribute to the development of takotsubo cardiomyopathy, to the best of our knowledge, this is the first case of takotsubo cardiomyopathy with coronary-LV fistula.