Migratory symptoms due to twiddler's syndrome in a patient with a biventricular defibrillator

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**Introduction:** Twiddler's syndrome is an uncommon complication of implanted cardiac devices. It is a serious complication with possibility of loss of pacing, failure of defibrillation or inappropriate shocks. Twiddler's syndrome is very rarely seen in cardiac re-synchronization therapy/defibrillator (CRT-D) devices possibly owing to their increased size and difficulty rotating within the pocket.

**Methods:** N/A

**Result:** Case Summary: A 44 year old man with a history of non-ischaemic dilated cardiomyopathy and ventricular tachycardia detected on holter monitor presented 2 months after CRT-D implantation with onset of muscular twitching in the right flank. Automated device interrogation was performed (unable to test left ventricular (LV) capture with acceptable atrial and right ventricular parameters) and chest x-ray (Figure A) showed LV lead dislodgement into the superior vena cava. Despite clinical suspicion of ACID malfunction the LV lead dislodgement was not recognised in the emergency department and as the atrial and right ventricular defibrillator leads appeared to be in a satisfactory position the patient was discharged with instruction to make a pacemaker clinic follow-up. He attended clinic 3 months later reporting that the muscular twitching symptom had moved and was now occurring in the left chest. Clinically there was left diaphragmatic pacing. Pacemaker interrogation revealed inability to capture from the LV lead and an increase in impedance. Atrial and right ventricular lead parameters were stable from implant. Repeat chest x-ray (Figure B) showed the LV lead had been retracted nearly fully out of the subclavian vein and there had been a change in position of the atrial lead and generator. The patient denied conscious manipulation of the device. Urgent lead revision was arranged and after 6 months of follow-up there was no recurrence and lead position remained satisfactory on repeat chest x-ray.

**Conclusion:** We present an uncommon case of twiddler's syndrome of a CRT-D device and show the natural history with migratory symptoms and documentation of progressive lead retraction over several months. Twiddler's syndrome should be considered in the differential if new onset of muscle stimulation or deterioration in lead parameters are detected. As seen in our case the increasing complexity and variety of implanted cardiac devices may make it difficult for non-specialist medical practitioners to recognise a device complication or malfunction.