

Letter to the Editor

Editöre Mektup

To extract, or not to extract: that is the question

Dear Editor,

I read the case entitled “Unexpected cause of lead fracture: A stylet left inside the right ventricular pacemaker lead” by Ates et al., published in the latest issue of the journal, with great interest.^[1] Some important issues regarding the case and lead extraction procedure should be mentioned: (i) Some operators often leave the stylet within the lead lumen, especially for the left ventricular lead; however, the retained-stylet technique has no place in current practice, despite the fact that the rationale offered for permanent retention of the stylet wire is the stabilization of the lead. In so doing, the relatively softer and more compliant lead structure takes on a more rigid and resistant status, which might result in externalization of lead structures, insulation failure, or fracture of the electrode. In addition, it precludes the use of possible lead extraction procedures that may be necessary later by blocking the inner lumen of the lead. An experienced implanter always considers the probability of the necessity of extraction in the future when implanting a device and behaves accordingly. It is not clear in the text whether the stylet was left in place in the first operation or during the replacement. (ii) A single-chamber pacemaker was implanted; therefore, the left ventricular ejection fraction (LVEF) should have been normal during the first implantation. The reason the new implant was not a cardiac resynchronization therapy (CRT) device could not be understood. The low LVEF of the patient (32%) was most likely associated with right ventricular pacing. Cardiac resynchronization therapy improves mechanical function of the heart and ejection fraction in these cases. If the diagnosis of cirrhosis affected the patient’s life expectancy, a CRT device without defibrillator function should have been considered. (iii) Extraction procedures are associated with considerable mortality and morbidity and, therefore, require experience. The procedure is performed with the lowest complication and mortality rate in high-volume centers. Early recognition and timely management of complications are of paramount importance. Anesthesia and surgical back-up, intra-arterial monitoring, and frequent echocardiographic follow-up are key elements that should be performed in all extraction procedures. In addition, all procedures,

especially in the case of >1 year since implant, should be performed in a hybrid operating room, if possible. (iv) The lead extraction procedure defined for leads implanted >1 year earlier includes the use of devices such as telescoping sheaths, locking stylets, powered or non-powered mechanical extraction tools other than simple stylets, and venous access sites other than the implant vein. Simple traction is the alternative answer. The procedure should first be initiated with traction, using simple styles, if possible. Tissue adhesions can be seen fluoroscopically. This traction should not be applied at a rate of more than 10 grams because the lead may be damaged and subsequent steps can be at risk. There are 2 types of mechanical, non-powered devices used most often in our country. Details about these devices and locking styles are outside the scope of this letter; however, the basic forces are traction, counterpressure, and countertraction. (v) For an extraction procedure, snare catheters suitable for femoral or jugular use, steerable electrophysiology catheters, biotomes, and large-bore steerable sheaths are all necessary for clinical and complete procedural success. (vi) Indications for an extraction procedure have been identified, and should be avoided until necessary because of the considerable mortality risk. (vii) Before any procedure related to any device, including the serious procedure of extraction, the decision about continuation with that device, the necessity of upgrade or downgrade, and perhaps most importantly, the continuation of device indication should be evaluated before the procedure.

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References

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