

EDITORIAL

Solution for transvenous lead extractions in developing countries

Transvenous lead extractions (TLEs) are an established treatment for cardiac implantable electric device (CIED) lead problems, especially for infections. Various lead extraction tools such as rotational mechanical sheaths, laser sheaths, telescoping mechanical sheath sets, lead locking stylets, snares, and others have also been developed for a safe and effective TLE. The clinical outcomes utilizing these technologies have been reported mainly from the advanced Western countries,^{1,2} and all of them have been well accepted. However, in the developing countries, these modern methods are not always available due to regulatory, reimbursement, and cost issues. Also in Japan, the TLE indications for non-infectious leads have changed due to the device lag caused by reimbursement problems during such times.³

During the TLE procedure, a countertraction technique to detach the lead tip from the embedded myocardium is an extremely important concept to avoid myocardial injuries. Advanced powered sheaths such as laser sheaths or rotational mechanical sheaths are generally used to achieve an effective countertraction. However, in developing countries, they often cannot be used even for patients with CIED infections, which is a class 1 indication for a TLE. There may be a dilemma in that situation as to how to treat the infection. The first-line therapy should be a standard TLE; however, if that is not available, open heart surgery, antibiotics with palliative treatment, or a problematic TLE would be selected. Jiratham-Opas et al reported a unique countertraction technique with a deflectable ablation catheter and deflectable long sheath.⁴ They avoided tenting of the myocardial wall and the resultant avulsion with a U-shaped deflectable catheter pushing against the myocardial wall. Although this method is not always considered to be effective, especially for very old leads, atrial leads, and leads tightly adhered to the vessel or valve and is not recommended for every operator, it can be utilized anywhere, and it seems it could be the solution for transvenous lead extractions in developing countries.

KEYWORDS

CIED infection, countertraction, transvenous lead extraction

ACKNOWLEDGMENT

John Martin contributed to the English writing of this manuscript.

CONFLICT OF INTEREST

The authors declare no conflict of interests for this article.

Morio Shoda MD, PhD 

*Clinical Research Division for Heart Rhythm Management,
Department of Cardiology, Tokyo Women's Medical University,
Tokyo, Japan*

Correspondence

Morio Shoda, Clinical Research Division for Heart Rhythm Management, Department of Cardiology, Tokyo Women's Medical University, Tokyo, Japan.
Email: shoda.morio@twmu.ac.jp

ORCIDMorio Shoda  <https://orcid.org/0000-0002-1772-6823>**REFERENCES**

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