LETTERS TO THE EDITOR

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A potential explanation for lower minor complication rate for lead extraction in high-volume centres

We read with interest the article by Monaco et al.1 published recently in EP-Europace entitled ‘Safety of transvenous lead extraction according to center volume: a systematic review and meta-analysis’. In this article which included the outcomes from our study,2 the authors concluded that the patients who had been treated in higher volume centres had a lower probability of minor complications and death at 30 days regardless of the infection rate, length of lead duration, type of device, and type of extraction.

The most common approach for transvenous lead extraction is the superior approach.3 However, in the literature the femoral snare approach after an unsuccessful superior approach was required in 27.1% of the evolution group and 8.2% of the laser group.4 In particular, adhered or entangled leads were more commonly encountered due to the increased necessity of multiple leads implantations in the recent years and extraction of these leads via the superior route is often impossible. Previously, we have suggested that lead extraction via the femoral approach by snare has needed greater experience than with the superior approach.5 If the authors of the present study were to compare the femoral approach after an unsuccessful superior approach in high- and low-volume centres; this might explain the higher rate of minor complications higher in low-volume centres.

Conflict of interest: none declared.

References


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Response to the letter by Tolga Aksu, Kazim Serham Ozcan, Tumer Erdem Guler

We thank Dr Aksu and his colleagues for their letter addressed to our article1.

In their letter, they raised the question whether the higher rate of minor complications of low-volume centres compared with high-volume centres might be attributed to failure of traditional transvenous lead extraction with the superior approach. On the other side, the chance to switch to other approaches such as the femoral one would be available mainly in skilled high-volume centres.

In our meta-analysis we included 24 papers with documented use of femoral approach ranging from 1.9% to 100% of the population undergoing transvenous lead extraction (15% medium value). In these results, major or minor complication rates, respectively, derived from subclavian and femoral approach were not distinguished. In fact, the two approaches were often used during the same procedure and, consequently, the authors reported a single complication rate. These missing values represented an important obstacle to proceed for a subgroup analysis. Specific data on femoral approaches are lacking from the literature and the few that are present are often fragmented and not sufficiently powered to be compared in a meta-analytic process.

We agree with the observation of Dr Aksu that the femoral approach might be more challenging and needs greater experience than the superior approach, but the difference between these two approaches could affect the procedure outcome and the consequent success rate more than the safety and the patients outcome. In order to prove this hypothesis, more accurate and detailed data from transvenous lead extraction procedures are required.

Reference


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New electrocardiographic criteria to differentiate the type-2 Brugada pattern from electrocardiogram of healthy athletes with r′-wave in leads V1/V2

Serra et al.1 present a well-written manuscript on new electrocardiographic criteria to differentiate the type-2 Brugada pattern from electrocardiogram of healthy athletes with r′-wave in leads V1/V2. They report three new electrocardiographic (ECG) criteria based on the characteristics of the r′-wave, with varied sensitivity and specificity as well as positive predictive values (PPV) and negative predictive values (NPV).

I caution the readers to be careful interpreting the PPV and NPV of these new diagnostic ECG criteria. The accuracy of the PPV and NPV will vary according to the prevalence of the disease in the population and therefore are rarely generalizable outside the reported study population. When the prevalence of the disease in low, the PPV decreases and can result in a greater proportion of false positive results (or diagnostic misclassification). This

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