

## CORRESPONDENCE

# Surgical management of ventricular arrhythmias

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In the Review by Roberts-Thomson *et al.* (Roberts-Thomson, K. C., Lau, D. H. & Sanders P. The diagnosis and management of ventricular arrhythmias. *Nat. Rev. Cardiol.* **8**, 311–321 [2011]),<sup>1</sup> in which the authors discussed the mechanisms, diagnosis, and management of ventricular arrhythmias, the role of cardiac surgical procedures was not mentioned at all. Improvements in catheter ablation techniques and implantable cardioverter-defibrillators have convincingly reduced the need for open-heart procedures in many patients with ventricular tachycardia (VT), but selected patients with structural heart disease could still benefit from surgery.

The joint American and European 2006 guidelines for management of patients with ventricular arrhythmias<sup>2</sup> (section 6.7.1) mentions direct surgical ablation or resection performed in experienced centers as an option for patients with therapy-resistant recurrent VT, although the short-term and long-term success rates and risks are difficult to evaluate owing to a lack of data. However, on the basis of publications from our group<sup>3–5</sup> and others,<sup>6–13</sup> which provide evidence of consistently high success rates and low operative risks in patients with ischemic heart disease, left ventricular aneurysms, and VT, we believe that surgery still has an important role in the management of VT in selected patients.

Surgical techniques to treat VT secondary to myocardial infarction were first described in 1978.<sup>14,15</sup> The effects of non-guided endocardectomy and cryoablation combined with left ventricular reconstruction in patients with ischemic ventricular arrhythmias was presented by Dor *et al.* in 1994.<sup>8</sup> Since then, other centers have reported on various surgical techniques for aneurysm repair with or without intraoperative mapping in patients with ventricular arrhythmias.<sup>6,7,9–13</sup>

Therefore, carefully selected patients with VT resistant to drug therapy or catheter ablation, unsuitable for cardioverterdefibrillator implantation, evidence of structural heart disease owing to prior myocardial infarction, left ventricular aneurysm, and suitable for left ventricular reconstruction should be referred to an experienced center for ventricular reconstruction, including surgical intervention for VT. Such patients will have a very good chance of long-term freedom from VT with surgical left ventricular reconstruction, and we advocate the use of this procedure.

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The authors declare no competing interests.

**Contributions**

Both authors researched the data for the article, contributed to the discussion of content, wrote the article, and reviewed and edited the manuscript before submission.

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