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Commentary: Radical cardiac weight reduction

Ronald K. Woods, MD, PhD

Luciani and colleagues¹ provide an interesting case report illustrating the importance of careful preoperative planning, judgment, and surgical execution when managing an uncommon presentation of a rare condition—in this case a giant intraseptal fibroma in an infant. I congratulate them for a successful outcome. Given the degree of dissection, I am not surprised the patient required extracorporeal life support to wean from cardiopulmonary bypass. I presume appropriate resource, expertise, and preoperative planning addressed the potential scenario of failure of myocardial recovery. Fortunately, sufficient recovery occurred. The presence of an intraseptal hematoma on extracorporeal life support was unnerving, no doubt, but the authors exercise prudent patience with conservative management.

For fibromas, the general consensus is complete resection. Of course, any tumor can be completely resected. The issue is the extent of dissection and how much and which portion of the heart remains after the resection and whether a functional arrangement can be established. An acceptable outcome can range from a normal 2-ventricle circulation to 1.5 or single-ventricle circulation, or even mechanical support as a bridge to transplant. It depends on the biology of the tumor, the threat to life, and any potential responsiveness to medical therapy. A fibroma is benign from an oncologic standpoint but clearly can cause life-threatening symptoms. In the case of inflow or outflow obstruction, partial resection that alleviates the obstruction

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CENTRAL MESSAGE

Resection of a giant intraseptal cardiac fibroma is feasible. Discerning the line between too much and too little resection requires good judgment.

and avoids sacrifice or damage of vital areas of the heart may be prudent. For the present case, the threat to life was ventricular tachycardia. I can't envision a partial resection strategy—on what basis would the surgeon decide which portion of the tumor to resect? It is encouraging that 8 months after surgery, the child is “thriving.” There is, however, a point of clarification. Complete resection does not guarantee resolution (or prevent recurrence) of ventricular tachycardia or other arrhythmias—consensus is lacking on this issue. The nature of the surgery and residua thereof may still provide substrate for arrhythmia. In the present case, septal scar from the dissection and several pledgets within the septum could act as arrhythmogenic foci. However, I don't argue with success. The authors were dealt a tough hand and did a fantastic job of managing this very complex case.

Reference

1. Luciani GB, Hoxha S, Pilati M, Sandrini C, Segreto A, Faggian G. Complete surgical resection of giant fibroma of the interventricular septum and left ventricle in an infant. *J Thorac Cardiovasc Surg Tech.* 2021;8:183-7.

From the Division of Pediatric Cardiothoracic Surgery, Herma Heart Institute, Children's Wisconsin; and Department of Surgery, Medical College of Wisconsin, Milwaukee, Wis.

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Address for reprints: Ronald K. Woods, MD, PhD, Division of Pediatric Cardiothoracic Surgery, Children's Wisconsin, 9000 W Wisconsin Ave, MS B 730, Milwaukee, WI 53226 (E-mail: rwoods@chw.org).

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