Skunk's poked: What now?

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The report by Yoneyama and colleagues¹ reminds us that rare (or underreported) events do occur. Given the plausible but not proven cause being injury to the septal perforator and given that more than 1700 isolated patch repairs of ventricular septal defect (VSD) occurs in the United States alone, not to mention repairs of other numerous malformations with concomitant VSD repairs, it is perhaps surprising that ventricular septal hematomas are not reported more frequently. Although based on limited data, the main

Devoid area for placing sutures indicated by triangular hatched area (with permission by Hosseinpour and colleagues⁴).

Central Message

In the absence of significant hemodynamic or rhythm compromise, it appears that ventricular septal hematomas can be managed medically with expectation of resolution in a matter of weeks.

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FIGURE 1. Septal perforator in relation to VSD and medial papillary muscle and devoid area where suture placement to avoid arterial injury may be safe (indicated by triangular hatched area, reproduced in part and modified with permission by Hosseinpour and colleagues⁴).

message appears to be mildly reassuring: More than half of ventricular septal hematomas can be expected to resolve with medical management within weeks to months. That surgical drainage should be done in the context of significant hemodynamic or rhythm compromise seems correct. However, we would be a bit more circumspect on this matter, recognizing the unpredictable nature of bleeding into a muscle disrupted only by a needle. This may produce a localized collection (as demonstrated in the reports by Zuhang and colleagues² and Mart and Kaza³) but also may lead to a more diffuse process less responsive to surgical drainage. In this regard, imaging (echocardiography, computed tomography, or magnetic resonance imaging) should be helpful; however, we acknowledge the bedside reality of an unstable patient and the difficult judgment implied in deciding how far to push medical management versus surgical drainage or anticoagulation and extracorporeal membrane oxygenation.

Yoneyama and colleagues¹ rightly cite Hosseinpour and colleagues⁴ 2001 report on septal perforators in congenitally malformed hearts and the “devoid” area (Figure 1), where sutures should be placed to avoid damage to the septal perforator. This article is worth reading in detail. Of note, in most biventricular hearts, the inferior interventricular artery supplied the atrioventricular node and both conduction bundles. Also, in 21 of 40 hearts, the medial papillary muscle was absent. In our experience with

VSDs, there is substantial variation in the number and pattern of chords and the degree of papillary muscle development and exact points of attachment. The point is that in the area near the VSD where the medial papillary muscle would be located if it were a classic text book medial papillary muscle, one should not venture too far from the VSD margin or place sutures too deeply. So if the septal perforator is indeed the skunk, don't poke it.

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