

Commentary: Small Patients with Big Wounds

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Abstract

Some would argue that kids aren't just little adults, but what about their sternums? We are reviewing a manuscript by Horriat, McCandless, and colleagues in the Journal of Cardiac Surgery¹ describing their experience with managing sternal wound infections (SWI) after congenital heart surgery. They report encouraging results in 14 patients who required plastic surgery consultation to manage their sternal wounds. The nature of congenital cardiac abnormalities and the necessary steps to repair them leads to physiologic derangements predisposing patients to SWI. Rates of SWI vary and have been reported at 1.53% in this population. There is little guidance on how the management of the congenital cardiac surgery patient should differ from the adult patient.²

Commentary: Small Patients with Big Wounds

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Running Head:

Congenital Sternal Wounds

Abstract:

Some would argue that kids aren't just little adults, but what about their sternums? We are reviewing a manuscript by Horriat, McCandless, and colleagues in the *Journal of Cardiac Surgery*¹ describing their experience with managing sternal wound infections (SWI) after congenital heart surgery. They report encouraging results in 14 patients who required plastic surgery consultation to manage their sternal wounds. The nature of congenital cardiac abnormalities and the necessary steps to repair them leads to physiologic derangements predisposing patients to SWI. Rates of SWI vary and have been reported at 1.53% in this population. There is little guidance on how the management of the congenital cardiac surgery patient should differ from the adult patient.²

Commentary:

In this month's *Journal*, Horriat, McCandless, and co-authors present their outcomes in the management of SWI in congenital cardiac surgery patients. 14 patients were evaluated and treated by their team. The authors clearly describe their approach to the management of these wounds as well as the demographics of their patients. They appear to have favorable outcomes within the limitations of this limited case series. In addition to several immediate SWIs, the authors successfully managed several late SWIs, one at 133 days and another at 574 days. We are interested in whether the authors modify their management in the case of these delayed/chronic wounds.

We (Figure 1) commend the authors for their excellent outcomes. SWI is a challenging problem, and the authors highlight some factors they consider when approaching closure. Their step-wise approach to the management of these wounds is clear and logical. We are interested in how the authors decide which pedicled flap to use. The delicate nature of the pectoralis major muscle is described in the manuscript, although it is still the primary tissue used for closure. Is it a case of the best of several poor options? The authors indicate they routinely use incisional wound VAC therapy, which has strong support in literature for adult sternal wounds and has been shown to be feasible in the pediatric population.^{3,4} In the case described in their figure 2, the authors describe how a patient with sternal instability required the wires to be left in place. This challenging situation required interval wound VAC prior to reconstruction and despite best efforts developed osteomyelitis, requiring prolonged IV antibiotics.¹

There may be benefits in continuous glucose monitoring and in sending mediastinal wound cultures at the time of closure, but there is a lack of consensus on how to manage SWI once they develop.² This manuscript and the cases described within illustrate the importance of a multidisciplinary approach to these complicated wounds. From critical care, to reconstruction, to wound care, to antibiotics, a team approach is needed. We appreciate the authors' description of their processes and methods and wish them continued success.

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Figure:

Legend: Andrew M. Young, MD (left), Anthony Norman, MD (center) and Irving L. Kron, MD (right)

