Commentary: Life on the cancer margin: Every millimeter counts

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Central Message

The optimum outcome is achieved by complete resection using whatever techniques necessary and available to achieve surgical cure.

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Cardiac angiosarcomas remain the most challenging clinical entity and although surgical resection is a mainstay of therapy, it rarely results in cure. Al-Sabeq and colleagues[1] describe a patient with recurrent cardiac angiosarcoma presenting with an obstructed bioprosthesis. Their case highlights the aggressiveness of this tumor and the need for multimodality therapy as well as describing an elegant surgical exposure that can assist radical surgical resection and reconstruction.

Angiosarcomas are resistant to radiation therapy and chemotherapy. Accordingly, surgical resection remains the primary mode of therapy. However, although wide surgical margins are known to be important in sarcoma resections, we are limited in our ability to radically excise malignant tumors of the heart by their proximity to vital structures. Fortunately, these tumors are rare and often cause obstructive symptoms early in their course, thus assisting detection as early as possible in the course of the disease. Owing to their low frequency of occurrence, few centers have amassed enough clinical experience in treating cardiac sarcomas because they are discovered incidentally or mistaken for myxomas. As a result, treatment of these lesions by inexperienced surgeons results in either deferral for surgery or inadequate resections that yield a high rate of locally recurrent disease. Yanagawa and colleagues[2] are leaders in their aggressive treatment of these cardiac tumors. Yet, as this case demonstrates, even in experienced hands, this disease may remain surgically incurable, despite the addition of chemotherapy and/or radiation therapy. In their most recent series of 95 patients who underwent radical resection of cardiac sarcomas over 25 years, Ramlawi and colleagues[3] report a median survival that is still only 20 months. Clearly, we have a long way to go.

As Al-Sabeq and colleagues[1] point out in the current article, radical resection (to the extent possible) and reconstruction provide the only chance for cure, and they have described several techniques for exposure and reconstruction, including the use of autotransplantation. Allotransplantation, although another option, may not extend survival and may not be the best use of a limited resource.[4] Furthermore, the need for immunosuppression can compromise survival in patients with cancer. The total artificial heart similarly is a poor solution because it combines the risk of recurrence with the risks of device-related complications and limited durability. Because we have reached the limits of our current surgical therapies, the next advance will either come from a technological leap forward with mechanical cardiac replacement or a new chemotherapy or radiation therapy modality targeted to this entity. Until such time, patients with suspected or known malignant cardiac tumors should be referred to centers with experienced multidisciplinary teams, and most importantly, surgeons skilled at radical cardiac resection and reconstruction because every millimeter counts. This will not only improve our ability to drive innovative therapies, but also offer patients a maximal chance for prolonged survival and perhaps someday a cure.

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