

Intralesional Versus Wide Resection of Low-Grade Chondrosarcomas of the Hand

Juan González del Pino, MD, PhD,* Santiago A. Lozano Calderón, MD, PhD,†
Ivan Chebib, MD,‡ Jesse B. Jupiter, MD§

 Continuing Medical Education

CME INFORMATION AND DISCLOSURES

The *Journal of Hand Surgery* will contain at least 2 clinically relevant articles selected by the editor to be offered for CME in each issue. For CME credit, the participant must read the articles in print or online and correctly answer all related questions through an online examination. The questions on the test are designed to make the reader think and will occasionally require the reader to go back and scrutinize the article for details.

The JHS CME Activity fee of \$15.00 includes the exam questions/answers only and does not include access to the JHS articles referenced.

Statement of Need: This CME activity was developed by the JHS editors as a convenient education tool to help increase or affirm reader's knowledge. The overall goal of the activity is for participants to evaluate the appropriateness of clinical data and apply it to their practice and the provision of patient care.

Accreditation: The ASSH is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

AMA PRA Credit Designation: The American Society for Surgery of the Hand designates this Journal-Based CME activity for a maximum of 1.00 "AMA PRA Category 1 Credits™". Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ASSH Disclaimer: The material presented in this CME activity is made available by the ASSH for educational purposes only. This material is not intended to represent the only methods or the best procedures appropriate for the medical situation(s) discussed, but rather it is intended to present an approach, view, statement, or opinion of the authors that may be helpful, or of interest, to other practitioners. Examinees agree to participate in this medical education activity, sponsored by the ASSH, with full knowledge and awareness that they waive any claim they may have against the ASSH for reliance on any information presented. The approval of the US Food and Drug Administration is required for procedures and drugs that are considered experimental. Instrumentation systems discussed or reviewed during this educational activity may not yet have received FDA approval.

Provider Information can be found at <http://www.assh.org/Pages/ContactUs.aspx>.

Technical Requirements for the Online Examination can be found at <http://jhandsurg.org/cme/home>.

Privacy Policy can be found at <http://www.assh.org/pages/ASSHPrivacyPolicy.aspx>.

ASSH Disclosure Policy: As a provider accredited by the ACCME, the ASSH must ensure balance, independence, objectivity, and scientific rigor in all its activities.

Disclosures for this Article

Editors

Jennifer Moriatis Wolf, MD, has no relevant conflicts of interest to disclose.

Authors

All authors of this journal-based CME activity have no relevant conflicts of interest to disclose. In the printed or PDF version of this article, author affiliations can be found at the bottom of the first page.

Planners

Jennifer Moriatis Wolf, MD, has no relevant conflicts of interest to disclose. The editorial and education staff involved with this journal-based CME activity has no relevant conflicts of interest to disclose.

Learning Objectives

Upon completion of this CME activity, the learner should achieve an understanding of:

- The difference between primary and secondary chondrosarcoma.
- The potential risks and benefits of intralesional excision of chondrosarcoma in the hand.
- The reasons one might choose amputation in the management of chondrosarcoma in the hand.

Deadline: Each examination purchased in 2016 must be completed by January 31, 2017, to be eligible for CME. A certificate will be issued upon completion of the activity. Estimated time to complete each JHS CME activity is up to one hour.

Copyright © 2016 by the American Society for Surgery of the Hand. All rights reserved.

Purpose To report our experience with intralesional curettage (resection with positive margins) and amputation (resection with negative margins) of low-grade chondrosarcomas (LCS) of the hand.

Materials and methods Skeletally mature patients treated surgically for LCS of the hand at our institutions were reviewed. Demographics and oncological history were collected. Results of the entire cohort and by treatment modality were analyzed radiographically, functionally (strength, Disabilities of the Arm, Shoulder, and Hand measure), cosmetically, and oncologically (recurrence, Musculoskeletal Tumor Society score, metastasis, and mortality rates).

From the *Department of Orthopaedic Surgery, Division of Hand Surgery, Hospital Universitario Santa Cristina, Madrid, Spain; the †Department of Orthopaedic Surgery, Division of Musculoskeletal Oncology, Harvard Medical School, Massachusetts General Hospital, Beth Israel Deaconess Medical Center; the ‡James Homer Wright Pathology Laboratory; and the §Department of Orthopaedic Surgery, Division of Hand Surgery, Harvard Medical School, Massachusetts General Hospital, Boston, MA.

Received for publication March 25, 2015; accepted in revised form December 14, 2015.

No benefits in any form have been received or will be received related directly or indirectly to the subject of this article.

Corresponding author: Santiago A. Lozano Calderón, MD, PhD, Department of Orthopaedic Surgery, Division of Musculoskeletal Oncology, Massachusetts General Hospital, YAW 3B Suite 3200, 55 Fruit St., Boston, MA, 02114; e-mail: slozancalderon@mgh.harvard.edu.

0363-5023/16/4104-0006\$36.00/0
<http://dx.doi.org/10.1016/j.jhsa.2015.12.025>

Results Seventeen cases in 16 patients were identified. Nine patients were women. Average age at surgery was 43 years (range, 20–80 years). Mean follow-up was 18 years (range, 9–23 years). Six of the 17 lesions treated at different institutions with intralesional procedures presented as recurrent disease. We treated 3 with a repeat intralesional procedure and the remaining with wide resection. Recurrence incidence was the same in both groups. The remaining 11 new-onset cases were treated with intralesional procedures (6) or wide resections (5). One of the 6 tumors treated with an intralesional procedure recurred. None treated with wide resection recurred. Recurrence incidence combining new-onset and recurrent disease after intralesional procedures was 22% versus 13% for wide resections. Average grip strength was 37 kg (range, 21–55 kg), and pinch strength was 7.6 kg (range, 4.5–12.5 kg). Mean Disabilities of the Arm, Shoulder, and Hand score was 2 (range, 0–10). There were no wound complications, and appearance was satisfactory in most cases (visual analog scale score, > 8). Average Musculoskeletal Tumor Society score was 29 points (range, 21–30 points). No patients presented with metastatic disease or died because of LCS.

Conclusions Intralesional resections aiming to preserve function are safe, recognizing that more than 1 procedure may be required. Amputation also plays a role with excellent functional outcome in cases in which severe joint deformity or involvement of soft tissues and neurovascular structures interferes with function. (*J Hand Surg Am.* 2016;41(4):541–549. Copyright © 2016 by the American Society for Surgery of the Hand. All rights reserved.)

Type of study/level of evidence Therapeutic IV.

Key words Chondrosarcoma, hand, intralesional curettage, low grade, wide excision.



CHONDROSARCOMAS ARE THE SECOND most common primary bone malignancy after osteosarcomas. Traditionally, they are divided into primary chondrosarcomas, which originate from normal bone with a primary intramedullary growth pattern, and secondary chondrosarcomas, which originate from benign cartilaginous lesions such as enchondromas or osteochondromas. Low-grade chondrosarcomas (LCS) rarely occur in the hand.^{1–3} The differential diagnosis includes bone infarct, sarcoidosis, and other granulomatous diseases such as tuberculosis.

Surgical resection is the treatment of choice because these tumors are resistant to radiotherapy and chemotherapy. Prognosis depends largely on their grade. The most commonly applied criteria for grading are those described by Evans et al.⁴ These include cellularity, matrix characteristics, nuclear features, and number of mitoses.⁴ However, low levels of inter- and intraobserver reliability in histological grading make final diagnosis difficult and controversial.^{5,6} In addition, the intrinsic histological heterogeneity of chondrosarcomas has made diagnostic biopsies less reliable.^{5–7} Therefore, additional emphasis has been placed on imaging studies to complement diagnosis, establish follow-up, and determine the need for surgery.⁷ Imaging over time to assess change and determine the tumor behavior is more valuable than a single study.⁷

The hand surgeon and musculoskeletal oncologist face major challenges when managing cartilaginous lesions in the hand. Characteristically, benign cartilage tumors of the hand contain more atypia when compared with those in other locations, making differentiation between benign and malignant lesions difficult.^{8,9} The most recent histological definition of LCS is a cartilaginous neoplasm showing infiltrating growth pattern with invasion and entrapment of preexisting trabecular bone or destructive entrapment or invasion of extraosseous soft tissue.¹⁰

Most studies have reported patients who presented with a secondary chondrosarcoma.^{11,12} This occurs in the setting of syndromic conditions such as multiple hereditary exostosis, Ollier disease, or Maffucci syndrome. It may also rarely occur as a malignant transformation from a benign lesion¹³ such as enchondroma or osteochondroma. Other manuscripts report on primary lesions.¹⁴ In both scenarios, follow-up has been short, and therefore, there is little published on assessing outcomes and prognosis after treatment.

We present the combined experience of 2 institutions and report the oncological and functional outcomes of intralesional curettage (positive margin resection) and amputation (negative margin resection) in 16 patients with 17 LCS of the hand with a minimum follow-up of 9 years. We also propose a protocol to approach

Download English Version:

<https://daneshyari.com/en/article/4066007>

Download Persian Version:

<https://daneshyari.com/article/4066007>

[Daneshyari.com](https://daneshyari.com)