Objectives: In this study, we aimed to evaluate the short-to-midterm results of the resection and reconstruction of large cystic lesions of the humerus.

Patients and methods: Eight male patients (median age: 22.9±10.4 years; range, 12 to 42 years) with large cystic lesions of the humerus operated between January 2017 and December 2019 were retrospectively analyzed. The age of the patients, their previous treatments and follow-up periods, the size and location of the cysts, postoperative functional scores, presence of a union,recurrence of the cyst, and graft resorption were examined.

Results: The mean follow-up was 42.8±7.5 (range, 34 to 54)months. Preoperatively, the mean length of the cystic lesions was 15.1±2.6 (range, 10 to 18) cm. At the final follow-up, the patients had a normal range of shoulder flexion-extension,internal rotation-external, abduction-adduction, and elbow flexion-extension, pronation-supination. The patients had a mean DASH score of 1.13±1.1 (range, 0 to 3.3) and MSTS score of 28.75±1.8 (range, 26 to 30) postoperatively. Complications such as pseudoarthrosis, graft resorption, or cyst recurrence were not observed in any of the patients.

Conclusion: Although the risk of recurrence is low in small cystic lesions of the humerus, it increases as the size of the lesion increases. This reconstruction technique using vascularized fibular grafts, which we applied, seems to be extremely successful in ensuring biological healing and preventing recurrence and complications in patients with large cystic lesions of the humerus.

Keywords: Cystic lesions, humerus, vascularized fibula graft.