The efficacy of radical resection for bone and soft tissue metastatic lesions of renal cell carcinoma

Takashi Higuchi[1] Norio Yamamoto[1] Katsuhiro Hayashi[1] Akihiko Takeuchi[1] Shinji Miwa[1], Hiroyuki Inatani[1], Takashi Kato[1], Yu Aoki[1], Kensaku Abe[1], Hiroyuki Tsuchiya[1]

[1]Department of Orthopedic Surgery, Kanazawa University, Japan

Purpose: This study evaluated the long-term outcome of surgery for metastatic renal cell carcinoma (RCC) to the bone or soft tissue.

Patients and Methods: Between 1993 and 2014, 30 patients underwent surgery for bone or soft tissue metastatic lesions of RCC in our institution. The surgical procedures were radical resection in 16 patients (group 1) and intralesional resection in 14 (group 2). These patients were retrospectively evaluated for factors implicated in the prognosis.

Results: The mean age was 62 years, and the mean follow-up period was 52 months. The surgical sites were the limb bone (15 patients), pelvis (8 patients), thoracic bone (4 patients), and soft tissue (3 patients). The 3-, 5-, 10-, and 15-year overall survival (OS) was 76%, 48%, 35%, and 23%, respectively, and OS was significantly favorable in group 1 compared with that in group 2 (P=0.039). In addition, the 5-year recurrence-free survival rate was significantly higher in group 1 than in group 2 (100% vs. 28%). Patients who had more than two other metastatic lesions at the time of surgery and patients with low risk according to the Motzer classification had unfavorable prognosis, whereas patients who underwent molecular targeted therapy had good prognosis (log-rank test). In the multivariate analysis, intralesional resection, low risk (Motzer classification), and new postoperative metastatic lesion were independent risk factors for poor prognosis.

Conclusion: Our results suggest that radical resection of bone and soft tissue metastatic lesions of RCC is a favorable option for controlling local metastasis and improving prognosis.