

Survival analysis of 121 patients with spinal metastases from single center

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Object. The prognosis in patients with spinal metastases is dismal, whether to undergo operative treatment still remains controversial. In this study, our aim is to investigate the safety and efficacy of surgery in 121 patients with spinal metastases.

Methods. A retrospective analysis of clinical data from April 2009 to March 2013 was performed in 121 patients with spinal metastases. From 37 to 65 years, 69 males and 42 females with mean age of 55.6 years. Primary tumor origin: Lung 35(28.9%), Breast 26 (21.4%), Renal 17 (14.0%), Prostate 20 (16.5%), Thyroid 14 (11.6%), Liver 2 (1.7%), Colon 1 (0.8%), other 6 (5.0%). All patients received surgery. Follow-up and survival time were analyzed. In preoperation and postoperative 3 month, pain levels were assessed by visual analogue scale (VAS), neurologic deficit was evaluated by Frankel Grade and functional impairment was classified by Karnofsky Score. The quality of the life was assessed by EORTC QLQ- C30 questionnaire.

Results. The period of follow-up ranged from 2 to 25 months with the average of 15.9 months. The mean survival was 14.5 months. 1-year survival was 53.5%. 2-year survival was 36.5%. In patients with lung cancer, the mean survival was 8.5 months. 1-year survival was 14.3%. 2-year survival was 11.4%. In patients with breast cancer, the mean survival was 31 months. 1-year survival was 57.7%. 2-year survival was 46.2%. In preoperation and postoperative 3 month, the VAS showed statistical significance($t=21.6, P<0.01$); post-operatively, 80.3% of all patients had functionally useful Frankel Grade D or E compared with 43.5% pre-operatively. KPS score (80-100) percentage was 75.6% postoperatively compared with 33.4% preoperatively. In 1 month postoperatively, 35 of 75 patients who were sphincteric dysfunction preoperatively were improved. The EORTC QLQ-C30 score was 83.39 ± 7.23 in preoperation and 51.34 ± 14.27 in postoperation. The quality of life was improved significantly($t=12.6, P<0.01$).

Conclusions. In all patients, the number of patents with spinal metastases from breast and lung cancer is higher. Compared with spinal metastases from breast cancer, the proportion of lung cancer origin received surgery is higher. Surgical operation in spinal metastases can prolong survival based on multimodality treatment. Surgical treatment was effective in improving quality of life by providing better pain control, enabling patients to regain or maintain mobility, and offering improved sphincter control.