Clinical review of necessity of cervical lymph node dissection for upper thoracic esophageal squamous cell carcinoma

Hae Won Lee, Jae Hyun Kim, Jin Wook Hwang, Jong Ho Park, Hee Jong Baek

Department of Thoracic Surgery, Korea Institute of Radiological And, Medical Science

Background

Necessity of cervical lymph node dissection for upper thoracic esophageal squamous cell carcinoma has been controversial. The aims of this study were to examine clinical benefits of cervical lymph node dissection by examining frequency of recurrence in cervical lymph nodes, difference of morbidity and survival rate of cervical lymph node dissection.

Patients and Methods

We studied 125 patients those who underwent curative resection for upper thoracic esophageal cancer from June 1987 to June 2009. Among them 78 patients received 2-field lymph node dissection, and 47 patients 3-field lymph node dissection including cervical lymph node dis- ection. We analyzed and compared preoperative diagnosis of cervical lymph node metastasis, morbidity, recurrence, site of recurrence, survival of two groups. Survival rates of two groups were compared by multivariate Cox-Proportional hazard model. We also analyzed accuracy of preoperative PET-CT results to study the diagnostic value of PET-CT scan.

Results

Male patients were 114 and female 11, and average age was 61.7 (38~77). There was no significant difference in age and gender between 2FD (2-field dissection) and 3FD (3-field dissection) groups. Patients were categorized by pathologic stage. Stage I patients were 3 (2FD : 2, 3FD : 1), stage IIA 14 (2FD :12, 3FD:2), stage IIB 49 (2FD:32, 3FD:17), stage III 35 (2FD:28, 3FD:2), stage IV 24 (2FD:4, 3FD:20) respectively. Average postoperative hopital stay was 25.1 days in 2FD, and 27.1 days in 3FD (p=0.608). Mobidity developed in 30 patients in 2FD (37.7%) and 18 in 3FD (38.3%). Vocal cord palsy was found in 14 patients in 2FD (17.9%) and 10 in 3FD (21.3%) and significant pneumonia was developed in 4 patients in 2FD(5.1%) and 2 in 3FD (4.3%). Operation related mortality was 6 cases in 2FD (7.7%) and 5 in 3FD (10.6%). Recurrence was found in 29 patients in 2FD (37.2%) and 14 in 3FD. Recurrence in cervical lymph nodes was found in 3 patients in 2FD (3.8%) and 3 in 3FD (6.4%). Five year survival rate of 2FD and 3FD was 33.3% and 28.8% respectively. There was no significant difference in survival rates of two groups. (p=0.21) Only pathologic stage but cervical lymph node dissection was prognostic

factor. Preoperative PET-CT was done in 67 patients in both groups. Cervical lymph node metastasis was diagnosed in 13 patients. PET-CT diagnosis was confirmed in 7 patients among them. False positive rate was 46% and false negative rate was 9.3%.

Conclusion

Recurrence rate in cervical lymph nodes was not high in our clinical review and was not lowered by cervical lymph node dissection. Cervical lymph node dissection did not increase the morbidity, hospitalization, mortality. But it did not increase the survival rate either. False negative predictive value of PET-CT for cervical lymph node metastasis was 9.3%. From these data, cervical lymph node dissection can be considerated in upper thoracic esophageal squamous cell carcinoma patients with PET-CT positive cervical lymph node but is not necessary for all.