The Impact of Age In Treatment Outcome of Squamous Cell Carcinoma In Head and Neck Cancer Patient

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**Background:** The treatment guidelines in the elderly HNSCC populations have not been well defined. The optimal treatment for the HNSCC elderly patients still be controversial issue, especially in Thailand. The chronological age is not the good predictive factor, and need to explore for the better predictive factors in treatment such as comorbidity, and geriatric assessment. This study identifies the impact of age to survival outcomes and treatment modality in locally advance HNSCC patients.

**Method:** We did the retrospectively reviews of HNSCC patients who treated at Ramathibodi hospital between January 2008 to December 2014. Patients who diagnosed with nasopharyngeal carcinoma were excluded. The study defined the elderly patients as age more than 65. We analyzed the impact of age, comorbidity, chronic disease status, performance status, and treatment modalities on clinical outcomes by using the log-rank test and HR with Cox proportional hazard models.

**Results:** All 601 patients, there were difference in the median OS between the elderly and the younger patients, the median OS was 27.0 months and 74.8 months with HR 2.68 (95%CI 2.12-3.37, P<0.001), respectively. In multivariate analysis, underweight (BMI<18.5) and hypoalbuminemia were poor prognosis factors of survival outcome in elderly HNSCC patient with HR 4.48 (95% CI 2.19- 9.15, P<0.001) and 6.99 (95%CI 2.44-19.99, P<0.001) respectively. In locally advance (stage III-IV) of elderly HNSCC patients, the curative treatment with surgery followed by adjuvant therapy and definitive CRT had longer median OS as compare with others modalities, however, there was no statistically significant, HR 0.83 (95% CI 0.41- 1.67, P 0.59) and 0.96 (95%CI 0.47-1.97, P 0.91), in respectively. There was no difference in OS between the chemotherapy treatment with Cisplatin-based regimen and non-Cisplatin based regimen, HR 0.78 (95%CI 0.49- 1.24, P 0.295). Moreover, there was more early termination of treatments in elderly patients who received Cisplatin-based regimens (33%vs6%).

**Conclusion:** This study has confirmed an adverse impact of age on survival outcome. Multimodality treatment in elderly patients had trend to improve OS in elderly patient who had good performance status. The optimal cutoff value for geriatric assessment in Thai population should be further evaluated.