

Defining Clinical Complete Response Using Endoscopy and Computed Tomography in Esophageal Cancer Patients Undergoing Chemoradiotherapy

Navarat Tangbumrungham¹, Nuttapong Ngamphaiboon², Chuleeporn Jiarpinitnun³, Poompis Pattaranutaporn³, Suriya Chakkaphak⁴, Kanpat Visutjindapon⁴, Papawee Paisan⁴, Kornkanok Somboonpun⁵, Pitichote Hiranyatheb⁴

¹Department of Otolaryngology, Ramathibodi Hospital, Faculty of Medicine, Mahidol University, Bangkok, Thailand

²Division of Medical Oncology, Department of Medicine, Ramathibodi Hospital Faculty of Medicine, Mahidol University, Bangkok, Thailand

³Division of Radiation Oncology, Department of Radiology, Ramathibodi Hospital Faculty of Medicine, Mahidol University, Bangkok, Thailand

⁴Division of General Surgery, Department of Surgery, Ramathibodi Hospital Faculty of Medicine, Mahidol University, Bangkok, Thailand

⁵Surgical Research Unit, Department of Surgery Ramathibodi Hospital, Faculty of Medicine, Mahidol University, Bangkok, Thailand

Abstract

Background: The validity of a clinical complete response (cCR) for predicting pathological complete response (pCR) and oncologic outcomes in esophageal cancer patients undergoing chemoradiotherapy (CRT) remains unclear. The aim of this study was to assess the outcomes of post-CRT patients with cCR using our available combined tools.

Methods: Locally advanced esophageal cancer patients who received neoadjuvant or definitive CRT at our institution were retrospectively reviewed. After completing CRT, combined endoscopy and CT findings were used to define cCR, and the correlation between cCR and treatment outcomes was analyzed.

Results: We identified 79 patients. cCR was observed in 13/41 (32%) and 10/38 (26%) patients treated with a trimodality approach and definitive CRT (DCRT), respectively. Esophageal cancer-specific survival was significantly better in cCR patients in the trimodality group ($p < 0.05$). In the DCRT group, the OS and DFS of cCR patients were significantly greater than patients with non-cCR ($p < 0.05$). Non-cCR patients in both groups had higher rates of disease recurrence compared with cCR patients ($p < 0.05$).

Conclusion: cCR in this study correlated well with pCR and survival outcomes in esophageal cancer patients undergoing CRT. A larger prospective study is warranted to confirm these results.

Key words: esophageal cancer, chemo-radiotherapy, clinical complete response, pathological complete response