

AB006. Effectiveness of chemotherapy as the first-line treatment for thymic tumors with pleural dissemination

Xuefei Zhang, Lanting Gao, Xiuxiu Hao, Fenghao Yu, Zhitao Gu, Wentao Fang

Shanghai Chest Hospital, Shanghai Jiao Tong University, Shanghai, China

Correspondence to: Wentao Fang. Shanghai Chest Hospital, Shanghai Jiao Tong University, No. 241, West Huaihai Road, Shanghai 200030, China. Email: vwtfang@hotmail.com.

Background: Chemotherapy has been recommended to be the standard care for thymic epithelial tumors (TETs) patients with pleural dissemination. Efficacy of chemotherapy on pleural lesions is not yet assessed in large patient populations. This study aims to evaluate pleural response to chemotherapy and to analyze the related factors on patient survival to see if chemotherapy is a satisfying first-line treatment for these patients.

Methods: Consecutive TET patients with pleural dissemination treated at Shanghai Chest Hospital between 2007 and 2018 were enrolled in this study. Overall response rate (ORR) was used to assess the efficacy of chemotherapy, using modified RESIST 1.1. ORR, disease-control time (DCT), progression-free survival (PFS) and overall survival (OS) were analyzed in this study. The efficacy of different chemotherapy regimens was assessed by univariate and multivariate analysis.

Results: A total of 158 patients were enrolled in the study. Among them, 124 had thymomas and 34 thymic carcinomas; 109 cases received intentional radiotherapy and/or surgical resection for pleural lesions after chemotherapy, and 49 cases received chemotherapy alone. Overall, 14 patients experienced a partial response (ORR =8.9%) of pleural lesions after chemotherapy, with no complete response observed. Paclitaxel-containing regimen was associated with a higher ORR than other regimens (12.9% vs. 1.8%, $P=0.018$), even in thymomas. Thymic carcinoma seemed more sensitive to chemotherapy than thymoma (17.4% vs. 6.5%, $P=0.08$) but also there were more progressive diseases in thymic carcinoma. Multivariate analysis showed that an increased chemotherapy response for pleural lesions was independently associated

with thymic carcinoma ($P=0.049$) and paclitaxel-containing chemotherapy ($P=0.043$). Thymoma and additional local therapy including surgery and radiotherapy, were associated with significantly prolonged PFS ($P<0.05$) and OS ($P<0.05$). For patients who received chemotherapy alone, the median disease control time (mDCT) was 10 months, while it was 24 months for those with additional local therapy.

Conclusions: For TETs with pleural dissemination, although paclitaxel-containing chemotherapy may be better than other regimens, chemotherapy as first-line treatment is not satisfying. Local therapies such as surgery and radiotherapy would help improve the therapeutic effect when applicable. Given the low response and survival rate of chemotherapy, novel treatment needs to be explored so as to improve management outcomes.

Keywords: Thymic tumors; pleural dissemination; chemotherapy

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Footnote

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Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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