Thoracic cancer

Background of patients (pts) with ALK rearranged (ALK+) non-small-cell lung cancer (NSCLC), and efficacy and safety of ALK inhibitors (ALK-Is) in actual clinical practice: Multicenter retrospective study

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Aim/Background: Alectinib (ALC) and crizotinib CRZ) are approved for pts with ALK+ NSCLC. Although ALC 600 mg twice a day (b.i.d.) is the recommended dose worldwide, 300mg b.i.d. is used in Japan. We investigated the background of pts with ALK+ NSCLC and the efficacy and safety of ALK 300 mg b.i.d. compared with those of CRZ in the clinical settings.

Methods: We conducted a multicenter retrospective analysis to evaluate the outcome of all pts diagnosed with ALK+ NSCLC and treated with ALK-Is at five institutions in Mie, Japan. Pts characteristics, response, outcome, and toxicity were evaluated. The primary endpoint was the duration of ALK-I treatment, which reflects pts benefit in term of discontinuance due to adverse events (AEs) in actual clinical practice. Survival curves were calculated using the Kaplan-Meier method and were compared with the log-rank test.

Results: We reviewed 41 pts with ALK+ NSCLC. Median age was 63 years (range, 28-89) and 51.2 % were females. 33 pts were treated with ALK inhibitors (ALK-Is); 26 pts received CRZ and 18 pts received ALC. All 26 pts in the CRZ group had no prior exposure to ALC. 10 pts in the ALC group had prior exposure to CRZ. Response rates to CRZ and ALC were 65.2% (95% CI: 42.7%-83.6%) and 76.9% (95% CI 46.2%-95.1%), respectively. Response rate to ALC after CRZ failure was 90.0% (9/10) (95% CI 55.5%-99.9%). 7 pts (26.9%) withdrew from CRZ because of AEs, including interstitial lung disease (ILD) in 2 pts, renal cysts, hypoalbuminemia and albuminuria, infection, liver dysfunction, and anorexia. Only one patient in the ALK group withdrew from ALC because of an AE (ILD). The median duration of ALK-Is treatment was 143 days (CRZ) vs. not reached (ALC) and was significantly longer for ALC (log-rank, 2-sided p = 0.047; HR = 0.408, 95% CI 0.169-0.987). Subgroup analysis of pts over 70 years of age treated with CRZ revealed that four (44.4%) discontinued CRZ; however, no statistical difference in the incidence of AEs was observed by age.

Conclusions: In this retrospective study, ALC 300 mg b.i.d. was well tolerated and significantly associated with a longer duration of treatment, and effective in pts with prior CRZ failure in clinical practice.

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