1547P Is there any prognostic significance in pleural involvement and/or effusion (Ple-I/E) in patients with ALK-positive NSCLC?

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Background: ALK mutation occurs in approximately 3-5% of patients with NSCLC. At the baseline, Ple-I/E are more frequent in ALK+ patients with NSCLC. In the study, we aimed to evaluate characteristics of ALK+ patients who have Ple-I/E.

Methods: In this multicenter study, patients with ALK+ NSCLC who have Ple-I/E were retrospectively analyzed. Clinical and demographic characteristics of the disease, response rates, median PFS and OS were evaluated in 362 ALK+ patients with NSCLC.

Results: Of the patients, 198 (54.7%) were male. The median age at the time of diagnosis was 54 (21-85) years. The median age was higher in male (57 vs 52 years; $p = 0.011$). The most common histology was adenocarcinoma (100%). At the baseline, 57 (15.7%) patients had Ple-I/E. The median age of patients with Ple-I/E was similar to patients without Ple-I/E (53 vs 55 years; $p = 0.541$). The rate of smokers was 43.4% ($n = 157$) in the patients. There was no association between Ple-I/E and gender, lung metastasis and distant LAP metastasis. Pleural involvement was higher in non-smokers than smokers (19.4% vs 13.4%; $p = 0.077$), but not statistically significant. The frequencies of liver, brain and bone metastasis were a significant higher in ALK+ patients with Ple-I/E compared to those with non-metastatasis (respectively 18.2% vs 4.8%, $p = 0.008$; 19.1% vs 4.8%, $p = 0.002$; 20.6% vs 8.9%, $p = 0.003$). The median PFS was longer in ALK+ patients who have Ple-I/E 18.7 vs 10.6 months, $p = 0.017$). The 1-, 2- and 3-year PFS were 59%, 36%, and 24% in patients with Ple-I/E and 47%, 24%, and 8% in patients with non-involvement. Similarly, the median OS was longer in ALK+ patients who have pleural involvement/infusion 44.6 vs 22.6 months, $p = 0.051$). The 1-, 2- and 3-year OS were 78%, 67%, and 57% in patients with Ple-I/E and 66%, 48%, and 34% in patients with non-involvement.

Conclusions: Brain, liver and bone metastases are lower in ALK+patients with Ple-I/E. Presentation with Ple-I/E in patients with ALK+ NSCLC is associated with longer overall and progression-free survival.

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