A case of treatment with afatinib + paclitaxel combination after PD treatment with afatinib in a patient with NSCLC

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Case: A 61-year-old man presented for thoracic surgery consultation on Jan. 6, 2011, for an abnormal shadow found on chest radiograph. He was considered as having a stage III A disease and underwent preoperative chemotherapy (CTx; CBDCA + paclitaxel). A right middle lobe resection (T1bN1M0 stage II A adenocarcinoma; EGFRexon19 del) was performed on May 23, 2011. He also underwent postoperative CTx. Because of the recurrence of the right hilar-mediastinal LN metastasis, RT (50.4 Gy) was initiated on Feb. 2, 2012. Owing to the recurrence of right lower lobe LN metastasis, RT (60 Gy) was initiated on Aug. 10, 2012. However, because of increased CEA level, he was transferred to the oncology department. Because of the recurrence of the right hilar LN, bevacizumab + CDDP + pemetrexed was initiated on Oct. 2, 2012. After 4 cycles of CTx and stable disease, maintenance CTx with bevacizumab + pemetrexed was initiated on Jan. 8, 2013. Progressive disease (PD) was observed after 4 cycles. Gefitinib was initiated on Apr. 2, 2013. Multiple meningeal seeding nodules were confirmed on brain MRI on Mar. 5, 2014. Erlotinib was then initiated on Mar. 8, 2014. Seeding nodules disappeared 2 months after treatment initiation. Afatinib 40mg was then initiated on May 8, 2014. The afatinib dose was increased to 50mg on May 30, 2014. Because meningeal seeding relapse was observed, afatinib + paclitaxel (80 mg/m², weekly) was initiated on Sept. 19, 2014. After 3 months of administration, no worsening of the meningeal seeding, reduced right hilar LN and pleural effusion were observed. The CEA level was also reduced.

(Discussion) Among the TKI agents with known effects on meningeal seeding, reports on the new drug afatinib are scarce. An effective post-PD treatment is unknown. In the LUX-Lung5 study, prolonged PFS has been reported with a combination CTx after PD treatment with afatinib. The usage experience of combination is low in Japan, but it is considered as one of the most effective treatments.