A CASE REPORT: 14 CYCLES PEMETREXED MAINTENANCE FOLLOWING PEMETREXED MONOTHERAPY INDUCTION (4 CYCLE) IN SECOND LINE TREATMENT OF A PATIENT WITH STAGE IV LUNG ADENOCARCINOMA

KOPRIVANAC A.1, Alilović M.1, Pelicarić D.1, Juričić Kursan M.1

1 Clinical Hospital Center Zagreb, Zagreb, Croatia
Clinic for pulmonary diseases Jordanovac

Background: Single agent pemetrexed maintenance therapy is widely accepted treatment protocol for patients with advanced nonsquamous NSCLC after successful induction treatment (resulting in stable disease, partial or complete response) with pemetrexed plus a platinum-containing chemotherapy or pemetrexed monotherapy.

Case: Male patient, now 42 years old, non smoker with positive family history of lung cancer (patients father) initially presented in January 2013 with dry cough and fever. Chest X-ray showed lower right lung lobe infiltration and patient was treated in hospital outside Zagreb under suspicion of pneumonia. MSCT scan showed lower right lung lobe infiltration with air bronchogram. Performed bronchoscopy did not show signs of malignancy. After 6 month of unsuccessful treatment with several line of antibiotics in combination with corticosteroids patient was sent to Clinic for pulmonary diseases Jordanovac. Repeated CT scan showed persistence of lower right lobe infiltration. After third time repeated bronchoscopy did not define etiology of pulmonary infiltration in August 2013 patient was referred to thoracic surgeon. Initially performed open biopsy resulted in lower right lobe lobectomy with mediastinal lymphadenectomy and diafragmal resection because of intraoperative cytology finding that suggested malignancy. Definitive pathohistological diagnosis showed stage IIB (T3N0M0), predominantly acinar type adenocarcinoma (later defined as EGFR and ALK negative). Patient underwent adjuvant chemotherapy with 4 cycles of cisplatin-etoposide. During follow up in August 2014
metastatic relapsed disease was detected (bilateral lung metastases) so patient received 4 cycles of carboplatin-paclitaxel. In February 2015 after verified disease progression (progression of bilateral lung metastases) patient received initially 4 cycles of pemetrexed monotherapy. Reevaluation showed partial regression of lung parenchymal metastases. Decision was made to try pemetrexed maintenance therapy. After 6 cycles of pemetrexed maintenance therapy further disease regression was verified. Overall 14 cycles were applied (500 mg/m2 every 3 weeks) until definitive disease progression. Pemetrexed maintenance therapy was well-tolerated by patient and resulted in very few complications (two cases of mild transitory thrombocytopenia). Afterwards patient has stared treatment with erlotinib and is alive until this date.

Conclusion: Acceptable toxicity and proven effectiveness of pemetrexed monotherapy maintenance makes it one of few preferred choices in responding patients with advanced nonsquamous NSCLC.