Clinical Oncology

Efficacy and safety of cisplatin plus pemetrexed in Egyptian patients with advanced malignant pleural mesothelioma

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Background: Malignant pleural mesothelioma (MPM) is a rare but aggressive tumor, epidemiological data prove that mesothelioma incidence in Egypt is rising markedly. Untreated malignant pleural mesothelioma (MPM) is associated with uniformly poor prognosis. Treatment options include surgery, chemotherapy and radiotherapy. Multimodality treatment regimens have been reported to prolong survival. In this study, we aimed to evaluate the efficacy and safety of cisplatin plus pemetrexed in Egyptian patients with non-operable pleural mesothelioma.

Methods: This prospective open labelled phase II trial, was carried out in clinical oncology department, Ain Shams University Hospitals during the period from June 2015 till September 2017. Patients with non-operable malignant pleural mesothelioma and radiologically measurable disease were treated using the combination of cisplatin (75 mg/m²) and pemetrexed (500 mg/m²) given every 3 weeks for maximum of 6 cycles, unacceptable toxicity or disease progression. Toxicity was assessed based on the Common Terminology Criteria for Adverse Events (CTCAE) scale, version 4, and the response to treatment was done based on modified RECIST criteria for mesothelioma.

Results: 26 patients were enrolled and evaluable. Mean age was 51.69 ± 7.06 years. Male: Female ratio was 1:1. The majority had stage III or IV disease (88.4%) and ECOG I (88.5%). Epithelial subtype was the dominant pathological subtype (88.5%). 14, 7, and 5 patients showed a complete response (CR) / partial response (PR), stable disease (SD), and progressive disease (PD), respectively. The objective response rate was 54%, and the disease-control rate was 81%. 4 patients (15%) had pleurectomy/decortication. The median progression-free survival 10.3 months, and the median OS was 15.8 months. The treatment was generally well tolerated. Hematological toxicities were more frequent and severe in both groups in comparison to other types of toxicities. The most common III/IV toxicities were: Nausea (15.4%), neutropenia (15.4%), and leucopenia (11.5%). There were no treatment-related deaths.

Conclusion: The combination of cisplatin plus pemetrexed provides promising activity and an acceptable safety profile for chemonaive Egyptian patients with MPM in the same recommend dosage and schedule used worldwide.