Adverse events (AEs) after first-line target therapy for advanced non-small cell lung cancer patients in Taiwan

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Introduction & Aim: The availability of targeted agents represents a precious resource in the treatment of EGFR mutation-positive is available for the treatment of patients with non-small cell lung cancer (NSCLC), given the long-term exposure of such patients to EGFR-TKIs, from those observed in patients, to evaluate the efficacy and antitumor activity and toxicity. The resultant significant physical and psycho-social discomfort might lead to interruption or dose modification of anticancer agents. This study aimed to identify reasons severe adverse events (AEs) among EGFR mutation-positive NSCLC patients treated with these three EGFR-TKIs.

Methods: From January 2014 to December 2015, patients with lung cancer treated in a teaching hospital in southern Taiwan were recruited as the research participants, retrospectively analyzed the patients with advanced or metastatic EGFR mutation-positive non-small cell lung cancer (NSCLC) who received Gefitinib, Erlotinib or Afatinib as first-line treatment.

Results: The analysis median age of the 88 patients (37 males, 51 females) was 63 years (range 29-94 years). About 62 patients (70%) never smoked and 84 (95%) had adenocarcinoma. The objective response rate was 58% and the disease control rate (partial response plus stable disease) was 80%. Common adverse events in all three EGFR-TKIs included rash, diarrhea and liver dysfunction, mainly grade 3 or 4 toxicity, including rash (10.2%), diarrhea (11.4%) and hepatotoxicity (6.8%). Frequency of Adverse events in 6 cases of hepatotoxicity, 3 cases of diarrhea and 2 cases of skin toxicity, the total frequency of AE that resulted in treatment withdrawal was 12.5% (11 out of 88 evaluable patients).

Conclusions: First-line target therapy as a preferred standard treatment in advanced NSCLC harboring sensitive EGFR mutations. This review outlines the classification, the pathogenesis and therapy of these skin, hair, nail and mucosal changes due to EGFR inhibition. Informing the patient and management of these side-effects is very important to reduce discomfort and as such to increase compliance to therapy.