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ERLOTINIB IN NON-SMALL-CELL LUNG CANCER PATIENTS FROM HOSPITAL FERNADO FONSECA EPE

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INTRODUTION

The oral epidermal growth factor receptor (EGFR) tyrosine-kinase inibitor (TKI) erlotinib is an established second-line treatment for advanced non-small-cell lung cancer (NSCLC).[1] Erlotinib delays disease progression and increases survival after first-line chemotherapy in patients with advanced NSCLC as second-line therapy.[2] Maintenance therapy with erlotinib, when compared to placebo, could be associated with a significantly longer progression free survival and tolerability mainly in EGFR activating mutation tumours.[3] However second line therapy with erlotinib is not more effective than chemotherapy (pemetrexed or other).[4,5] In terms of traditional toxicities associated with chemotherapy, Erlotinib seems to have a better safety profile than chemotherapy, with no haematological toxicities, the most common event was mild to moderate skin rash which is relatively manageable.[5] There is a lack of evidence regarding efficacy of Erlotinib used as second line *versus* third line therapy.

OBJECTIVES

To compare Erlotinib effectiveness profile in Hospital Fernando Fonseca NSCLC patients when used as second or third line therapy.

METHODS

We have followed up 30 NSCLC patients, who have done Erlotinib before and after other approved chemotherapies, during 14 months starting from June 2011. During this period we have collected patient's demographics and baseline characteristics and also their EGFR mutational status. To determine Erlotinib effectiveness we calculated progression–free survival (PFS) which was defined as the time from Erlotinib therapeutic initiation to the date of documented disease progression or death.

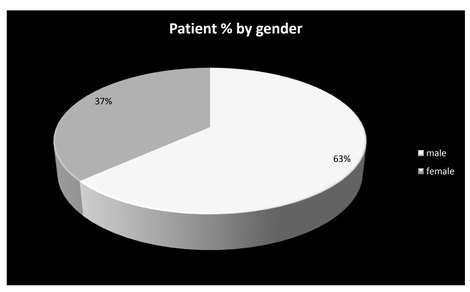

Fig. 1

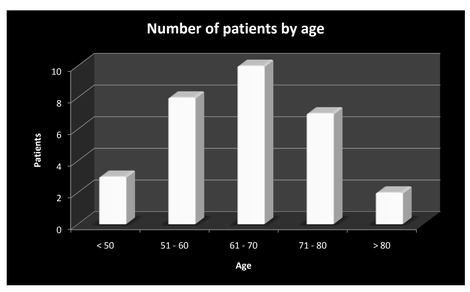

Fig. 2

RESULTS

The median age of our 30 patients was 62,5 years (Fig.2). The most common pathological subtype was adenocarcinoma (66,7 %) (Fig.3). 46,6 % of our patients had received one prior chemotherapy regimen before Erlotinib and 36,6 % had received two prior chemotherapy regimen before Erlotinib. Two patients have done Erlotinib as a first line therapy. Median PFS for second line Erlotinib patients is 18,7 weeks while for third line Erlotinib patients is 12,3 weeks (Fig.4 and 5). Only 50 % of our patients had available information regarding EGFR mutational status; however patients who harbor tumor-associated EGFR activating mutation seem to have higher response rates to Erlotinib. Rash was the most common treatment-related adverse event with Erlotinib, as expected.

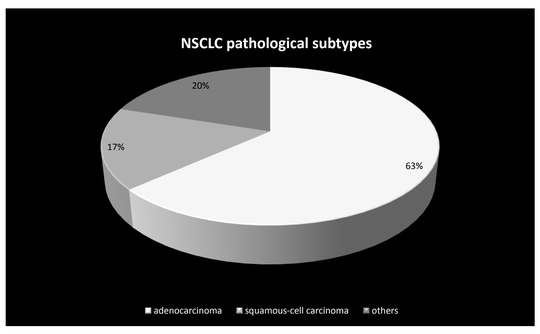

Fig. 3

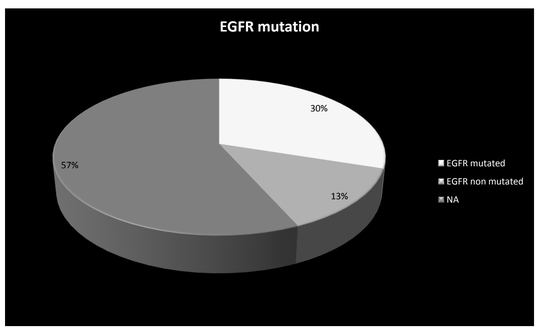

Fig. 6

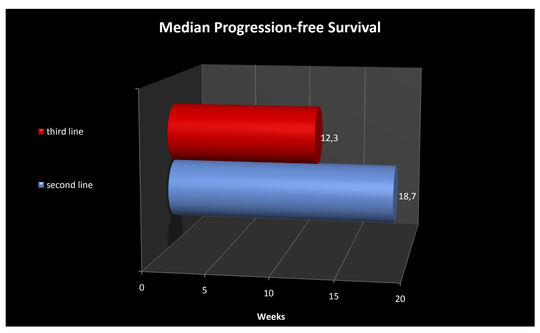

Fig. 4

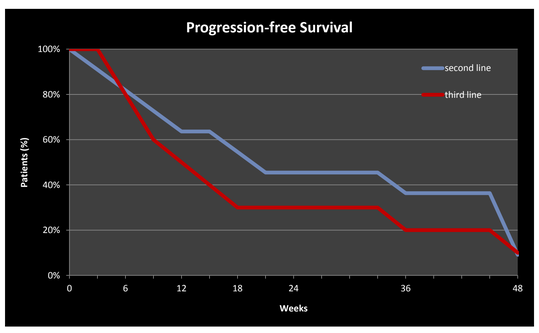

Fig. 5

CONCLUSIONS

Our results show that maybe there could be a better disease outcome for advanced NSCLC patients if the oral epidermal growth factor receptor tyrosine-kinase inhibitor (Erlotinib) is administered as a second line therapy instead of using it as a third line therapy. As far EGFR mutational status is concerned it seems that enhanced efficacy is related with EGFR mutation-positive disease.

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