Kapasitas difusi paru terhadap karbon monoksida (DLCO) pada pasien adenokarsinoma paru yang mendapat EGFR-TKI di Rumah Sakit Umum Pusat Persahabatan Jakarta, Indonesia = Lung diffusion capacity of lung adenocarcinoma patients treated with the epidermal growth factor receptor-tyrosine kinase inhibitors in Persahabatan Hospital Jakarta, Indonesia

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Abstrak

Latar belakang : Efek potensial EGFR-TKI terhadap fungsi paru belum diinvestigasi secara mendalam. Penelitian ini bertujuan untuk menilai efek pemberian EGFR TKI terhadap fungsi paru terutama nilai DLCO.
Metode : Penelitian berlangsung secara prospektif dari September 2018 hingga Juni 2019 di Rumah Sakit Persahabatan Jakarta. Terdapat 20 subjek adenokarsinoma paru dengan mutasi tunggal di exon 19/21 yang dapat menyelesaikan pemeriksaan DLCO baik sebelum mendapat EGFR TKI dan setelah tiga bulan terapi.
Hasil : Penelitian ini mendapatkan peningkatan bermakna nilai rerata KVP prediksi dari 60,6% menjadi 68,25% (p=0,03), nilai rerata VEP1 Prediksi dari 59,7% menjadi 67,05% (p=0,036), nilai rerata DLCO dari 11,55 ml/menit/mmHg menjadi 13,72 ml/menit/mmHg (p=0,004) dan DLCO prediksi dari 53,4% menjadi 63,85% (p=0,03). Peningkatan nilai rerata DLCO prediksi paling besar pada kelompok dengan hasil RECIST partial response yaitu sebesar 16,43% (p=0,056).
Kesimpulan : Terapi EGFR TKI selama tiga bulan pada subyek adenokarsinoma paru dengan mutasi tunggal exon19/21 dapat meningkatkan fungsi paru secara bermakna baik nilai KVP prediksi, VEP1 prediksi, DLCO, dan DLCO prediksi.
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Background : The epidermal growth factor receptor (EGFR) tyrosine kinase inhibitors (TKIs) are drugs of choice in non-small cell lung cancer possessing EGFR mutation. Its effect on the lung function is not well understood. This study aims to assess lung function using the lung diffusion capacity (DLCO) test in lung cancer patients treated with EGFR-TKIs. ming
Method :
This prospective study included lung cancer patients treated with EGFR-TKIs at Persahabatan Hospital Jakarta, Indonesia, between September 2018 andGrowt June 2019. The study recruited 20 lung adenocarcinoma patients presented with a single mutation at exon 19 or 21 as subjects in the process. Their DLCO was examined before and three months after receiving EGFR-TKI. Subjects were grouped according to the Response Evaluation Criteria in Solid Tumors (RECIST) assessment.
Results: There was an increase in predicted FVC from 60.60% to 68.25% (p=0.03), predicted FEV1 from 59.7% to 67.05% (p=0.036%), DLCO from 11.5 mL/minute/mmHg to 13.72 mL/minute/mmHg (p=0.004), and predicted DLCO from 53.4% to 63.85% (p=0.03) during the therapy. The largest increase of predicted DLCO was shown in RECIST group of partial response (16.43%, p=0.056) Conclusion: This study found an improvement in lung function (predicted FVC, predicted FEV1, DLCO, and predicted DLCO) among lung adenocarcinoma subjects exhibiting single mutation at exon 19 or 21 after three months of EGFR-TKIs

treatment.