

ABSTRACT

COMPARISON SALMETEROL-FLUTICASONE DRY POWDER INHALER (DPI) WITH INDACATEROL DRY POWDER INHALER (DPI) THERAPEUTIC DOSE ON CHANGES IN LUNG FUNCTION IN POST-TUBERCULOSIS PATIENTS

By

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Background: Post-TB sequelae is related with patient's response immunological to Mycobacterium tuberculosis infection. Obstructive and restrictive in post-TB sequelae decreased lung function measured using spirometry.

Purpose: This study aims to determine comparison of salmeterol-fluticasone dry powder inhaler (DPI) with indacaterol dry powder inhaler (DPI) at therapeutic doses on changes lung function in post-tuberculosis patients.

Methods: The design study is experimental groups with two-control group design. The sample was 30 post-TB were given salmeterol-fluticasone for 3 months and 30 post-TB were given indacaterol for 2 months. The mMRC measured using a questionnaire, lung function measured using a spirometry device, chest radiography was assessed for lung abnormalities in the cavity, atelectasis, fibrosis, and bronchiectasis. Six-minute walk test measured using the distance traveled in meters for 6 minutes and oxygen saturation measured using an oximeter. Data were analyzed using the Mann Whitney difference test, Spearman rho correlation and one-way ANOVA

Results: This study showed there was a significant change between the lung function of FEV1/FVC patients in salmeterol-fluticasone, 15 patients changed in improvement after receiving salmeterol-fluticasone ($p = 0.000$). There's a significant relationship the administration of salmeterol-fluticasone and increase in distance of 54.334 meters, 6-minute walk test/6MWT ($p = 0.000$). There was a significant relationship between mMRC and FEV1/FVC in post-tuberculosis patients ($p = 0.041$)

Conclusion: There is a comparison of salmeterol-fluticasone dry powder inhaler (DPI) with indacaterol dry powder inhaler (DPI) at therapeutic doses on changes lung function in post-tuberculosis patients.

Keyword: 6MWT, FEV1/FVC, indacaterol, mMRC, post-TB, salmeterol-fluticasone.

ABSTRAK

PERBANDINGAN SALMETEROL-FLUTICASONE DRY POWDER INHALER (DPI) DENGAN INDACATEROL DRY POWDER INHALER (DPI) DOSIS TERAPEUTIK TERHADAP PERUBAHAN FUNGSI PARU PASIEN PASCA TUBERKULOSIS

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Latar Belakang: Gejala sisa pasca TB berhubungan dengan respons imunologis pasien terhadap infeksi *Mycobacterium tuberculosis*. Kelainan obstruksi dan restriksi pada gejala sisa pasca TB dapat menyebabkan penurunan fungsi paru yang dapat diukur menggunakan spirometri.

Tujuan: Penelitian ini bertujuan untuk mengetahui perbandingan *salmeterol-fluticasone dry powder inhaler* (DPI) dengan *indacaterol dry powder inhaler* (DPI) dosis terapeutik terhadap perubahan fungsi paru pasien pasca tuberkulosis.

Metode: Desain penelitian ini adalah *experimental groups* dengan rancangan *2 control group design*. Sampel adalah 30 pasien pasca-TB yang diberikan salmeterol-flutikason 3 bulan dan 30 pasien pasca-TB yang diberikan indacaterol 2 bulan. Nilai mMRC diukur menggunakan kuesioner, Fungsi paru diukur menggunakan alat spirometri, sedangkan radiografi toraks dinilai dari kelainan paru berupa Kavitas, atelectasis, fibrosis, dan bronkiektasis. Tes jalan 6 menit diukur menggunakan jarak tempuh jalan dalam meter selama 6 menit dan saturasi oksigen diukur menggunakan alat oksimeter. Data dianalisis menggunakan uji beda *mann whitney*, korelasi *spearman rho* dan *one-way annova*.

Hasil: Penelitian ini menunjukkan bahwa terdapat perubahan bermakna antara fungsi paru VEP1/KVP pasien pada perlakuan salmeterol-flutikason, 15 pasien mengalami perubahan perbaikan setelah mendapatkan salmeterol-flutikason ($p=0,000$). Terdapat hubungan bermakna pada pemberian salmeterol-flutikason dan mengalami kenaikan jarak 54,334 meter pada uji jalan 6 menit/6MWT ($p=0,000$). Terdapat hubungan bermakna pada mMRC dengan VEP1/KVP pada pasien pasca tuberkulosis ($p=0,041$).

Kesimpulan: Terdapat perbandingan *salmeterol-fluticasone dry powder inhaler* (DPI) dengan *indacaterol dry powder inhaler* (DPI) dosis terapeutik terhadap perubahan fungsi paru pasien pasca tuberkulosis.

Kata Kunci: 6MWT, indacaterol, mMRC, pasca-TB, salmeterol-flutikason, VEP1/KVP