

## INTISARI

### **PENGARUH *PURSED-LIP BREATHING* PADA PASIEN PENYAKIT PARU OBSTRUKTIF KRONIK STABIL TERHADAP KAPASITAS FUNGSIONAL YANG DINILAI DENGAN UJI JALAN ENAM MENIT**

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**Latar Belakang.** Jumlah penderita PPOK di Indonesia diperkirakan terus bertambah dan saat ini telah mencapai 4,8 juta penderita yang mengakibatkan dampak beban sosio-ekonomi yang besar. Penatalaksanaan PPOK memerlukan pendekatan komprehensif yang melibatkan kegiatan rehabilitasi seperti *Pursed Lip Breathing* (PLB), guna meningkatkan kapasitas fungsional penderita. Penilaian kapasitas fungsional fisik penderita PPOK dapat dievaluasi melalui Uji jalan Enam Menit/*6-minutes walk test*, yang dapat pula menilai perubahan kapasitas fungsional pasca intervensi seperti program rehabilitasi paru.

**Tujuan Penelitian.** Penelitian ini bertujuan untuk mengetahui pengaruh rehabilitasi paru dengan teknik PLB selama 4 minggu terhadap capaian jarak tempuh melalui uji jalan enam menit pada penderita PPOK yang mendapatkan terapi standar.

**Metode.** Penelitian eksperimental, *Randomized Controlled Trial* (RCT), yang dilakukan pada pasien PPOK stabil GOLD 2 dan GOLD 3. Penelitian dilakukan di Rumah Sakit Khusus Paru (RSKP) Respira Bantul, Yogyakarta. Subjek diambil secara acak sebagai kelompok perlakuan (PLB) atau kontrol. Kelompok perlakuan terdiri dari 38 subyek, melakukan PLB 8 menit selama 28 hari (4 minggu) berturut-turut. Kelompok plasebo terdiri dari 37 subyek hanya meneruskan terapi standar sebelumnya. Pengukuran uji jalan enam menit dilakukan pada kedua kelompok sebelum dan sesudah perlakuan dan dibandingkan antara kelompok PLB dan kontrol. Beda rerata delta capaian jarak antara kelompok yang mendapat PLB dan kontrol diuji dengan uji-*t* tidak berpasangan.

**Hasil Penelitian.** Terdapat perbedaan peningkatan delta rerata uji jalan enam menit yang tidak bermakna diantara kedua kelompok penelitian. Peningkatan delta mean capaian jarak pada uji jalan enam menit kelompok perlakuan lebih besar ( $22,19 \pm 45,54$  meter) dibandingkan dengan kelompok kontrol ( $18,54 \pm 42,57$  m), dengan nilai  $P=0,720$ .

**Kesimpulan.** Terdapat perbaikan kapasitas fungsional berupa peningkatan jarak capaian pada Uji jalan enam menit penderita PPOK yang mendapatkan terapi standar dan rehabilitasi paru dengan teknik *pursed-lips breathing* (PLB)

**Kata Kunci.** PPOK, *Pursed-Lips Breathing*, Uji Jalan enam menit.

## ABSTRACT

### THE EFFECT OF PURSED-LIP BREATHING ON FUNCTIONAL CAPACITY OF STABLE CHRONIC OBSTRUCTIVE PULMONARY DISEASE PATIENT ASSESSED BY SIX MINUTES WALK TEST

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**Background.** The number of people with COPD in Indonesia is estimated to continue to grow and currently has reached 4.8 million sufferers resulting in a large socio-economic burden. Management of COPD requires a comprehensive approach involving rehabilitation activities such as Pursed Lip Breathing (PLB), in order to increase the functional capacity of sufferers. Assessment of physical functional capacity of COPD patients can be evaluated through the Six Minute Walk Test / 6-minutes walk test, which can also assess changes in post-intervention functional capacity such as pulmonary rehabilitation programs.

**Objective.** This study aimed to determine the effect of pulmonary rehabilitation with PLB technique for 4 weeks on the achievement of distance through a six-minute road test in COPD patients who received standard therapy.

**Methods.** An experimental, Randomized Controlled Trial (RCT) study was conducted on stable COPD patients GOLD 2 and GOLD 3. The study was conducted at the Rumah Sakit Khusus Paru (RSKP) Respira Bantul, Yogyakarta. Subjects were taken randomly as a treatment (PLB) or control group. The treatment group consisted of 38 subjects, doing PLB 8 minutes for 28 days (4 weeks) in a row. The placebo group consisted of 37 subjects only continuing the previous standard therapy. Six-minute walking test measurements were carried out in both groups before and after treatment and compared between the PLB and control groups. The difference in average delta distance between groups that received PLB and controls was tested by unpaired t-test.

**Result.** There was a difference in the increase in the average delta of the six-minute walk test which was not significant between the two study groups. The increase in delta mean the distance in the six-minute walk test treatment group was greater ( $22.19 \pm 45.54$  meters) compared to the control group ( $18.54 \pm 42.57$  m), with a  $P = 0.720$ .

**Conclusion.** There was an improvement in functional capacity in the form of increased performance distance in the six-minute walk test for COPD patients who received standard therapy and pulmonary rehabilitation by pursed-lip breathing (PLB) technique.

**Keywords.** COPD, Pursed-Lip Breathing, Six-minute walk test