

## INTISARI

### PENGARUH PURSED-LIPS BREATHING TERHADAP BODE INDEX

#### PADA PENDERITA PENYAKIT PARU OBSTRUKTIF KRONIK

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**Latar Belakang.** *World Health Organization* (WHO) menempatkan PPOK sebagai penyebab kematian terbesar keempat di dunia dengan angka kematian mencapai 2,75 juta jiwa pertahunnya atau 4,8% dari keseluruhan angka kematian di dunia. Penatalaksanaan penderita PPOK sebaiknya didasarkan atas panduan dan disesuaikan dengan gejala dan tingkat gangguan kemampuan. Salah satu strategi penatalaksanaan PPOK adalah dengan program rehabilitasi paru, salah satunya adalah dengan teknik *Pursed Lips Breathing* (PLB). BODE Index telah terbukti dalam memprediksi mortalitas, hospitalisasi dan sensitif mengalami perubahan dengan intervensi seperti program rehabilitasi paru.

**Tujuan Penelitian.** Penelitian ini bertujuan untuk mengetahui pengaruh rehabilitasi paru dengan teknik PLB selama 4 minggu terhadap BODE Index 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 yang memenuhi kriteria inklusi diambil secara acak sebagai kelompok perlakuan (PLB) atau kontrol. Kelompok perlakuan terdiri dari 41 sampel, meneruskan terapi standar sebelumnya dan melakukan PLB 8 menit selama 28 hari (4 minggu) berturut-turut. Kelompok plasebo terdiri dari 37 sampel hanya meneruskan terapi standar sebelumnya. Pengukuran skor BODE Index dilakukan pada kedua kelompok sebelum dan sesudah perlakuan dan dibandingkan antara kelompok PLB dan kontrol. Beda rerata delta BODE Index antara kelompok yang mendapat PLB dan kontrol diuji dengan *Mann Whitney U test*.

**Hasil Penelitian.** Terdapat perbedaan penurunan delta mean skor BODE Index yang bermakna pada kedua kelompok penelitian. Penurunan delta mean skor BODE Index pada perlakuan didapatkan lebih besar ( $-0,71 \pm 1,23$ ) dibandingkan dengan kelompok kontrol ( $-0,14 \pm 1,06$ ), dengan nilai  $p=0,04$ .

**Kesimpulan.** PLB 8 menit perhari selama 4 minggu, terbukti bermakna memperbaiki BODE Index pada penderita penyakit paru obstruktif kronik (PPOK)

**Kata Kunci.** PPOK, Penyakit Paru Obstruktif Kronik, PLB, *Pursed-Lips Breathing*, BODE Index.

## ABSTRACT

### EFFECT OF PURSED LIPS BREATHING TO THE BODE INDEX IN PATIENTS WITH CHRONIC OBSTRUCTIVE LUNG DISEASE

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**Background.** The World Health Organization (WHO) puts COPD as the fourth largest cause of death in the world with a death rate of 2.75 million people per year or 4.8% of the total mortality in the world. Management of patients with COPD should be based on guidelines and adjusted for symptoms and level of impaired ability. One of the strategies for managing COPD is a pulmonary rehabilitation program, including Pursed Lips Breathing (PLB) technique. The BODE Index has been proven to predict mortality, hospitalization and sensitive to change with interventions such as pulmonary rehabilitation programs.

**Aim of Study** This study aimed to determine the effect of pulmonary rehabilitation with PLB technique for 4 weeks to the BODE Index in COPD patients who received standard therapy.

**Method.** An experimental study, Randomized Controlled Trial (RCT), was performed on stable COPD patients GOLD 2 and GOLD 3. The study was conducted at the Lung Special Hospital Respira Bantul, Yogyakarta. Subjects who met the inclusion criteria were taken randomly as a treatment group (PLB) or control. The treatment group consisted of 41 samples, continued the previous standard therapy and performed an 8-minute PLB for 28 days (4 weeks) respectively. The placebo group consisted of 37 samples who only continued previous standard therapy. Measurement of BODE Index scores was carried out in both groups before and after treatment and compared between PLB groups and controls. The mean difference between the mean delta of BODE Index between groups that received PLB and controls were tested with Mann Whitney U test.

**Result.** There was a significant decrease in mean of delta BODE Index score in both research groups. The decrease mean delta of BODE Index score on treatment group (PLB) was higher ( $-0,71 \pm 1,23$ ) than control group ( $-0,14 \pm 1,06$ ), with  $p = 0,04$ .

**Conclusion.** PLB 8 minutes per day for 4 weeks, proved to be significant in improving BODE Index in patients with chronic obstructive pulmonary disease (COPD)

**Keywords :** COPD, Chronic Obstructive Pulmonary Disease, Pursed Lips Breathing, PLB, BODE Index