

INTISARI

PENGARUH *PURSED-LIPS BREATHING* TERHADAP PERBAIKAN KUALITAS TIDUR PADA PENDERITA PENYAKIT PARU OBSTRUKTIF KRONIK STABIL

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Latar belakang. PPOK menyebabkan kondisi hipoksia kronis yang memberikan dampak pada kualitas tidur. *Pursed-lips breathing* (PLB) merupakan salah satu teknik kontrol pernapasan bagian dari rehabilitasi pulmoner yang dapat memperlancar oksigenasi di seluruh tubuh. Penelitian mengenai rehabilitasi pulmoner terhadap perbaikan kualitas hidup ataupun kualitas tidur telah dilakukan di beberapa negara, namun khusus mengenai PLB terhadap kualitas tidur belum pernah diteliti.

Tujuan Penelitian. Tujuan utama penelitian ini adalah untuk menganalisis pengaruh rehabilitasi pulmoner dengan menggunakan teknik *pursed-lips breathing* (PLB) terhadap perbaikan kualitas tidur pada pasien PPOK stabil.

Metode. Penelitian ini menggunakan desain *randomized controlled trial*, open label pada pasien PPOK rawat jalan yang dinilai kualitas tidur saat awal dengan kuesioner *Pittsburgh Sleep Quality Index* (PSQI) kemudian dilakukan randomisasi. Subyek dibagi menjadi 2 kelompok, yaitu kelompok perlakuan yang mendapat latihan teknik PLB dan kelompok kontrol. Terapi standar tetap dilanjutkan. Setelah 4 minggu dilakukan evaluasi ulang skor PSQI.

Hasil Penelitian. Sebanyak 43 subyek penelitian yang dianalisis pada akhir penelitian, terdiri dari 20 orang kelompok PLB dan 23 orang kelompok kontrol. Rerata umur kelompok PLB $65,40 \pm 8,03$ tahun dan kelompok plasebo $66,60 \pm 7,50$ tahun. Terjadi penurunan skor PSQI yang lebih besar pada kelompok PLB sebesar $1,10 \pm 2,10$ ($p=0.030$) dibandingkan kelompok kontrol sebesar $0,87 \pm 1,32$ ($p=0.006$). Namun tidak didapatkan perbedaan rerata delta PSQI pada kedua kelompok ($p = 0,295$)

Kesimpulan. Meskipun tidak terdapat perbedaan kualitas tidur yang bermakna secara statistik pada kedua kelompok, namun perbaikan kualitas tidur lebih banyak terjadi pada kelompok PLB. Dapat dipertimbangkan latihan *pursed-lips breathing* sebagai terapi tambahan pada pasien PPOK stabil yang sudah mendapat terapi medikamentosa standar.

Kata kunci: PPOK stabil, *pursed-lips breathing*, kualitas tidur, *Pittsburgh Sleep Quality Index*, hipoksia

ABSTRACT

EFFECT OF PURSED-LIPS BREATHING ON THE IMPROVEMENT OF SLEEP QUALITY IN PATIENTS WITH STABLE CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Background: COPD can caused a condition called chronic hypoxia that can lead to sleep quality problem. Pursed-lips breathing (PLB) is breathing retraining technique, part of pulmonary rehabilitation that can help the oxygenation flow in the body. Nowadays, there are several studies about the effect of pulmonary rehabilitation on the quality of life or sleep quality have been done in several country, but there are no studies about the effect of PLB on sleep quality.

Objective : The aim of this study was to analyze the effect of pulmonary rehabilitation with pursed-lips breathing technique on the improvement of sleep quality in patients with stable COPD.

Method : Method used in this research was randomized controlled trial design. We conducted open label in COPD outpatient with early symptom of depression by scoring them with Pittsburgh Sleep Quality Index (PSQI) questionnaire and then we randomized the result. The subjects was divided into two groups, the study group who went through PLB training and the control group. Standard therapy were maintained. After four weeks, the PSQI score was being evaluate.

Results : Out of total 43 subjects, 20 subjects were in the PLB group and 23 subjects were in the control group. The average age of subjects in the PLB group was $65,40 \pm 8,03$ years old and in the placebo group was $66,60 \pm 7,50$ years old. There was a bigger decrease of PSQI score in the PLB group $1,10 \pm 2,10$ ($p=0.03$) compare to the control group $0,87 \pm 1,32$ ($p=0.006$). But, there was no difference of the mean of delta between these two groups ($p = 0,295$).

Conclusion : Despite no significant difference in the sleep quality between two groups statistically, the improvement of the symptoms of sleep quality were much more to be found in the PLB group. As a result, pursed-lips breathing exercise may be considered as an adjunctive therapy for stable COPD patient that already receiving standard medical treatment

Keywords: stable COPD, pursed-lips breathing, sleep quality, Pittsburgh Sleep Quality Index, hypoxia