Efektivitas preoperatif incentive spirometry terhadap atelktasis pneumonia dan hipoksemia pasca operasi mayor abdomen = Efficacy of incentive spiromtry in reducing atelectasis pneumonia and hypoxemia after major abdominal surgery

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Abstrak

[ABSTRAK
 Tujuan dari penelitian ini adalah untuk menilai dampak dari preopratif incentive spirometry terhadap komplikasi paru dan uji fungsi paru di antara pasien dengan operasi abdomen mayor Pasien yang menjalani operasi mayor abdomen tanpa riwayat penyakit paru secara acak dibagi menjadi dua kelompok: kelompok latihan dan kelompok kontrol. Kelompok Latihan diberi 15 menit latihan empat kali sehari selama 2 hari sebelum operasi. Kelompok kontrol tidak menerima latihan. Pengukuran fungsi paru baseline dan pasca operasi diambil pada kedua kelompok. Fungsi paru pasca operasi diukur dari hari pertama sampai hari ketujuh. Semua pasien dinilai untuk komplikasi paru pasca operasi oleh ahli pulmonologi.

Kami merekrut 23 pasien dalam setiap kelompok. Insiden komplikasi paru adalah 56,5% pada kelompok kontrol dan tidak ada komplikasi yang ditemukan di antara pasien pada kelompok latihan. Ada penurunan yang signifikan dari komplikasi paru pada kelompok exrcise (p <0,001). Ada penurunan signifikan dari atelektasis (p <0,01), pneumonia (p 0,025), Hipokemia (p 0,005). Incentive spirometry memiliki efek perlindungan dengan resiko relative (RR) 0,11 (CI 95% 0,02-0,74). Odds Ratio (OR) untuk komplikasi pada kelompok kontrol adalah 3,3 (OR 3,30 CI 95% 1,97-5,54) pada komplikasi paru. Dalam hal fungsi paru, kami menemukan peningkatan yang signifikan pada Vital Capacity (dari 2336,96 + 722,56 mL ke 2541,30 + 718,78 mL dengan p <0,01) dan Force Vital Capacity (dari 2287,39 + 706 , 11 untuk 2469,57 + 676,10 dengan p <0,01) setelah latihan. Sebagai kesimpulan, preoperatif incentive spirometry dapat menurunkan insiden komplikasi paru.ABSTRACT The aim of this study is to assess the impact of preoperative incentive spirometry on pulmonary complication and pulmonary fuction test among patients with major abdominal surgery. Petient underwent major abdominal surgery without any history pulmonary disease were randomized into two group: the exercise group and the control group. Exercise group were given 15 minute exercise four times daily for 2 days prior to surgery. The control group receive no exercise. Baselie and post-surgery pulmonary function measurement were taken in both groups. Post surgery pulmonary function measure in first until seventh day after surgery. All patients were assessed for post operative pulmonary complication by attending
pulmonologist.

We recruited 23 patients in each group. The incidence of pulmonary complication was 56,5% in the control group and no complication were found among patient in the exercise group. There was a significant decrease of pulmonary complication in exrcise group (p <0,001). There were signigicant decrease of atelectasis (p <0,01), pneumonia (p 0,025), Hipoxemia (p 0,005). Incentive spirometry has protective effect with relative risk (RR) 0,11 (CI 95% 0,02-0,74). Odds Ratio (OR) for complication in control group was 3,3 (OR 3,30 CI 95% 1,97-5,54) on pulmonary complication. In terms of pulmonary function, we found significant increase on Vital Capacity (from 2336,96 + 722,56 mL to 2541,30 + 718,78 mL with p<0,01) and Force Vital

Capacity (from 2287,39 + 706,11 to 2469,57 + 676,10 with p<0,01) after exercise.
As conclusion, preoperative incentive spirometry may decrease incidence of pulmonary complication. , The aim of this study is to assess the impact of preoperative incentive spirometry on pulmonary complication and pulmonary fuction test among patients with major abdominal surgery. Petient underwent major abdominal surgery without any history pulmonary disease were randomized into two group: the exercise group and the control group. Exercise group were given 15 minute exercise four times daily for 2 days prior to surgery. The control group receive no exercise. Baselie and post-surgery pulmonary function measurement were taken in both groups. Post surgery pulmonary function measure in first until seventh day after surgery. All patients were assessed for post operative pulmonary complication by attending pulmonologist.
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