Perbaikan fungsi intrinsik longitudinal ventrikel kiri sebelum dan sesudah latihan olahraga pada pasien gagal jantung dengan fraksi ejeksi yang normal = The improvement of longitudinal intrisic function of left ventricle before and after exercise training in heart failure with preserved ejection fraction patient

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Abstrak

Lima puluh persen penderita gagal jantung merupakan gagal jantung dengan fraksi ejeksi yang normal (HFPEF). Morbiditas dan mortalitas HFPEF belumlah jelas. Latihan olahraga telah menjadi rekomendasi pertama dalam beberapa panduan klinis, namun belum pada HFPEF. Strain longitudinal apikal 4 ruangan dapat digunakan sebagai nilai prognostik. Perbaikan fungsi longitudinal intrinsik ventrikel kiri menggunakan strain longitudinal apikal empat ruangan akibat latihan olahraga belumlah diketahui. Kuasi eksperimental menggunakan 30 sampel konsekutif HFPEF, dilakukan program latihan olahraga tersupervisi. Program latihan olahraga dilakukan selama satu bulan. Dilakukan pemeriksaan ekokardiografi, 6MWT, kuesioner MLWHF dan WHO. Terdapat perbedaan yang signifikan dalam 6MWT, nilai skoring MLWHF dan WHO5 sebelum dan sesudah latihan olahraga. Didapatkan nilai strain longitudinal sebesar -16,20% (-10,7% sampai dengan -17,81%). Strain longitudinal apikal 4 ruangan mengalami perbaikan pada minggu ke 2 dan ke 4 latihan olahraga (sebelum latihan olahraga LS = -16,20 [-10,70 to -17,81]; minggu ke dua latihan olah raga LS = -18,00±2,69 dan minggu ke 4 latihan olahraga LS = -21,86±1,79) dan terdapat perbedaan yang signifikan (p < 0,001). Terdapat perbaikan fungsi intrinsik longitudinal ventrikel kiri sebelum dengan sesudah diberikan program latihan olahraga pada penderita gagal jantung dengan fraksi ejeksi yang normal.
.....Fifty percent of patients with heart failure are heart failure with preserved ejection fraction (HFPEF). Morbidity and mortality of HFPEF is unclear. Exercise has become the first recommendation in several clinical guidelines, but not yet in HFPEF. Apical 4 chamber longitudinal strain can be used as a prognostic value. But the improvement of longitudinal intrinsic left ventricular function using apical 4 chamber longitudinal strain due to exercise training is not yet known. Quasi- experimental study using thirty consecutive sample of HFPEF. Exercise training program was conducted for a month. Echocardiography, 6MWT, MLWHF and WHO questionnaire was performed before and after exercise. There was significant differences in the 6MWT, the value of MLWHF and WHO5 score before and after exercise. Longitudinal strain values obtained by -16.20 % (-10.7% to -17.81%). Four chamber longitudinal strain was improved at weeks 2 and 4 of exercise (before exercise LS = -16.20[-10.70 to -17.81]; the second week of exercise training LS = -18.00±2,69 and week 4 exercise LS = -21.86 ± 1.79) and there were significant differences (p < 0.001). There was an improvement in the longitudinal intrinsic left ventricular function before and after exercise training in patients with heart failure with preserved ejection fraction.