Response of Interleukin-6 to two different aerobic training programs after renal transplantation: A pilot randomized controlled trial

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Abstract : Background: Interleukin-6 (IL-6) is an inflammatory cytokine that plays a role in transplant rejection. Appropriate dose of physical training represent a useful, safe and non-pharmacologic contribution to renal transplants treatment.**Purpose:** to compare between the effect of walking and stationary bicycle as physical therapy approaches in decreasing of interleukin 6 in patients after renal transplantation. **Method:** Forty' patients of both sexes who undergone renal transplantation with age ranged from 30 to 45 years old participated in this study. They were recruited from Educational Cairo university hospitals. They were assigned into two groups equal in number: Group A included 20 patients who received aerobic exercise in the form of walking for 30 minutes 3 times per week for 12 week.Group B included 20 patients who received aerobic exercise on stationary bicycle for 30 minutes 3 times per week for 12 week. Interleukin 6 was measured before and after training program. **Results:** Statistical analysis revealed a significant improvement in interleukin 6 in both groups A and B and non-significant difference between group A and group B after aerobic exercise training. **Conclusion:** Regular aerobic exercise in the form of walking and bicycles are an effective low cost treatment that reduces levels of interleukin-6 (IL-6) in renal transplant's patients. Accordingly, patients who undergone renal transplantation are advised to perform regular aerobic activities.

Key words: Walking, Stationary bicycle, Interleukin 6, renal transplantation.

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