EFFECT OF RESISTIVE EXERCISE ONLAND VERSUS UNDERWATER RESISTIVE EXERCISE IN POST BURN CHILDREN

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Abstract

Purpose: to determine the effect of resistive exercise onland versus underwater resistive exercise in post burn children. Methods of evaluation: (Measurement of bone mineral content, lean body mass and peak oxygen consumption “VO₂max”). Subjects: 28 children aged 8 – 12 years of both sexes suffered from severe burn covering 30% or more of the total body surface area (TBSA); all children received Oxandrolone (0.1 mg/kg/day). Children were randomly divided into two groups of equal numbers (14 children in each group). Group (A) consisted of 14 children with mean age 10.11 years received resistive exercise program while Group (B) consisted of 14 children with mean age 10.21 years received underwater resistive exercise program. Both groups participated in 12 weeks exercise program. Measurement of BMC, LBM and VO₂ max were done before enrolling in exercise training and after exercise training. Results are expressed as mean ± standard deviation (SD). Comparison between variables in the two groups was performed using unpaired t test while comparison between mean values of variables measured pre- and post-treatment within the same group was performed using paired t test. Results: In both groups, LBM, BMC and VO₂ max were significantly greater after exercise training than before start of training with group B showing more significant improvement than group A. Conclusion: Exercise-induced enhancements in muscle mass, bone mineral content, VO₂ max were improved in both groups however significant effect was greater in favour of group (B). Key words (resistance exercise, underwater resistive exercise, lean body mass, bone mineral content, VO₂ max, severe burn).