

EFFECT OF UNDERWATER RESISTIVE EXERCISE IN POST BURNED CHILDREN

Somaia A. Hamed, physical therapy department for diseases, faculty of physical therapy, October 6 University. **Mohamed A. El-Markby**, department of plastic surgery, faculty of medicine, Al Azhar University, **Ibrahim M. Zoheiry**, physical therapy department for surgery, faculty of physical therapy, October 6 University.

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Abstract

Purpose: the Purpose of the study was to determine the effect underwater resistive exercise in post burned 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. Group A (control group) consisted of 14 children (8 boys and 6girls) with mean age± (SD) 10.10 ±0.78years received resistive exercise program while Group B (study group) consisted of 14 children with mean age± (SD) 10.11 ±0.67years (9 boys and 5girls) 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 program while group B showing more significant improvement than group A.

Conclusion: Exercise induced enhancements in muscle mass, bone mineral content, VO₂ max in both groups however significant effect was greater in favor of group (B).

Key words (resistance exercise, underwater resistive exercise, lean body mass, bone mineral content, VO₂ max , severe burn).