

## Effectiveness of rehabilitation in post-COVID compared with post-cardiosurgery patients. A single Center experience

Villani GQ.; Rosi A.; Corbellini D.; Schettino V.; Bosoni A.; Covini I.; Ambiveri G.

San Giacomo Hospital, Piacenza, Italy

**Funding Acknowledgements:** Type of funding sources: None.

The COVID 19 disease is frequently associated with significant disability related to intensive care unit-acquired weakness, deconditioning, myopathies and neuropathies. However there are no data on the results of a specific rehabilitative treatment in this group of patients.

The aim of our work was to evaluate the effectiveness of a personalized rehabilitative therapy in group of post-COVID patients (A, 47 patients, average age  $65.3 \pm 11.6$  y, 27 M,) comparing the results with a group of post-cardiosurgical patients COVID 19 negative (B, 47 patients, average age  $63.5 \pm 10.3$  y, 29 M) evaluating the degree of clinical complexity (Rehabilitation Complexity Scale, RCS-E V13) and the degree of autonomy recovery (Six-minute walking test SMWT, Barthel Index, BI) pre and post-treatment.

In Group A patients the Rehabilitation program is associated with a significant improvement in autonomy recovery (BI admission  $29.7 \pm 20$  vs discharge  $72.7 \pm 28.6$   $p < 0.005$ , SMWT admission  $146 \pm 25$  vs  $318 \pm 18$  m,  $p < 0.005$ ) and in clinical complexity (RCS admission  $10.9 \pm 1.1$  vs discharge  $5.3$ ,  $p < 0.05$ )

**Conclusions:** Post-COVID patients show a greater loss of autonomy than post-cardiosurgery patients. Rehabilitative treatment has proven effective in ensuring adequate functional recovery with similar results to those obtained in the population of cardiological subjects COVID 19 negative.

Group A vs Group B

	Group A	Group B	p
pre-rehabilitation hospital stay (days)	$31 \pm 5$	$8 \pm 2$	0.005
RCS admission	$10.9 \pm 1.1$	$11.6 \pm 1.2$	ns
BI admission	$29.7 \pm 20$	$47.7 \pm 19$	0.05
SMWT admission (m)	$146 \pm 25$	$255 \pm 18$	0.05
Rehabilitation duration (days)	$29.7 \pm 12.8$	$29.6 \pm 10.1$	ns
RCS discharge	$5.3 \pm 2$	$6.5 \pm 2$	ns
BI discharge	$72.7 \pm 28$	$71.5 \pm 22.5$	ns
SMWT discharge (m)	$385 \pm 18$	$410 \pm 25$	ns

**RCS:** rehabilitation complexity scale, **BI:** Barthel Index, **SMWT:** six-minute walking test