SPA-BASED REHABILITATION FOR LONG COVID SYNDROME: A PROSPECTIVE STUDY ON FUNCTIONAL AND PSYCHOSOCIAL OUTCOMES IN PREVIOUSLY HOSPITALIZED AND NON-HOSPITALIZED PATIENTS

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Background and Aims

Long Covid is associated with persistent symptoms such as fatigue, dyspnea, cognitive impairment, and psychological distress, often resulting in a marked decline in patients' quality of life and autonomy. Conventional rehabilitation may not sufficiently address the multisystemic nature of the condition. Spa settings, integrating traditional treatments with land-based and aquatic rehabilitation, may represent an innovative therapeutic option. This study aimed to evaluate the effects of a 5-week spa-based rehabilitation program on physical, psychological, and cognitive outcomes in Long Covid patients, and to compare recovery patterns based on prior hospitalization status during the acute phase.

Methods

A prospective study was conducted involving Long Covid patients participating in a structured 5-week program at a certified spa center. The intervention included thermal aerosol therapy, individualized physiotherapy (land and aquatic), and cognitive training. Patients were divided into two subgroups based on whether they had been hospitalized during the acute infection. Assessments were performed at baseline (T0), post-treatment (T1), and at 3-month (T2) and 6-month (T3) follow-up. Outcome measures included fatigue (Fatigue Assessment Scale - FAS), dyspnea (Modified Medical Research Council scale - mMRC), pain (Visual Analog Scale - VAS), motor function (6-Minute Walking Test - 6MWT), psychological well-being (Beck's Anxiety Index - BAI and Beck Depression Index - BDI), and quality of life (12-item Short Form Survey - SF12).

Results

Significant improvements were observed in FAS, mMRC, VAS, 6MWT, BAI and BDI at T1, with sustained benefits at T2 and T3 ($p < 0.05$). Previously hospitalized patients had initially lower scores in SF12 but showed progressive improvement, reaching similar outcomes to non-hospitalized patients by T3.

Conclusion

Spa-based rehabilitation appears to be a promising approach for Long Covid recovery, offering tailored interventions that address the complex needs of both hospitalized and non-hospitalized patients. These findings support the inclusion of spa facilities in future rehabilitation models for chronic conditions.

Keywords: Long Covid; balneology; aquatic therapy.