

Effect of physiotherapeutic treatment on the quality of life in a patient with antiphospholipid syndrome: A case report

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Abstract

Antiphospholipid syndrome (APS) is a systemic autoimmune disease with elevated levels of antiphospholipid antibodies (aPL). The chronic course, multisystem involvement, limitation of physical activity and frequent fatigue lead to reduced health-related quality of life. There is insufficient scientific evidence in the literature regarding the feasibility and safety of using physical rehabilitation factors and their impact on functional activity and quality of life in these patients.

We present the case of a 44-year-old woman with APS, for whom we conducted a physiotherapy course and reported a positive change in quality of life and functional indicators. This case may lead us to implement more frequently, target-oriented and effectively the possibilities of physical and rehabilitation medicine in patients with APS.

Keywords: Antiphospholipid (Hughes) syndrome; Physical medicine and rehabilitation; Health-related quality of life (HRQoL); Short-form health survey (SF-36).

Abbreviations: APL: Antiphospholipid antibodies; APS: Antiphospholipid syndrome; HRQoL: Health-related quality of life; ICF: International Classification of Functioning, Disability and Health; MFIS: Modified Fatigue Impact Scale; PMR: Physical Medicine and Rehabilitation; SF-36: Short-form health survey; VAS: Visual Analog Scale

Introduction

Antiphospholipid syndrome (APS) is a chronic systemic autoimmune disease characterized by vascular thrombosis and pathological course of pregnancy with elevated levels of antiphospholipid antibodies (aPL). The chronic course and multisystemic involvement, as well as the need for long-term anticoagulant therapy, frequent manifestations of fatigue, reduced physical activity and fearful limitation of daily activities significantly affect the quality of life.

Health-related quality of life is a concept that assesses the quality of life in physical, mental and social aspects of the individual. Several studies have shown reduced health-related quality of life in patients with APS compared to the healthy population [1-5]. An integral approach in patients with a chronic disease requires the application of the bio-psycho-social model of behavior (based on the ICF), taking into account the assessment of body functions and structures, activities and participation, personal factors and environmental factors [6].

The purpose of this case report is to investigate the feasibility and safety of a comprehensive physiotherapy program focused on the rehabilitation of a patient with a chronic disease - APS. We are tracking the effect of physical rehabilitation tools on pain, fatigue, functional activity and quality of life in patients with APS.

Case Presentation

Introducing the 44-year-old female with primary APS and congenital thrombophilia – a combination of heterozygous carrier of several mutations. The woman presented to Clinic of Physical medicine and rehabilitation in June 2022 for complaints of pain in the cervical and lumbar regions, numbness in the lower legs, forearms and 4 and 5 fingers bilaterally; pronounced stiffness, swelling and tightness in the lower legs after walking about 20 meters; headache and marked fatigue. Accompanying diseases: femuroacetabular impingement syndrome; Heberden's arthrosis of small joints; chronic bronchitis; autoimmune thyroiditis. MRI data for: Disc bulging at L4-5; Bone haemangioma of L5; Cervical arthrosis; Disc protrusions of C4-C5, C5-C6.

The goal of the rehabilitation program is to influence the joint-muscular manifestations, chronic fatigue and sensory disturbances and impact on the pain syndrome through a task-oriented selection of physical and rehabilitation means while observing the increased thrombotic risk.

Therapeutic approach: The patient underwent a two-week course of treatment, including magneto therapy (Magnetomed 4000 device - magnetic flux density 40 Gauss, frequency 40 Hz, duration 20 minutes, 10 procedures, 5 procedures per week), 4-chamber hydrogalvanic baths (indifferent temperature, duration 20 minutes, 5 procedures per week, 10 procedures per course) and medium-frequency electrotherapy (isoplanar vector technique - frequency 80-100 Hz, 100% modulation, duration 15 minutes, 10 procedures, 5 procedures per week). Tips on motor behavior were also discussed. Lack of physical activity is a recognized major public health challenge. Physical activity is important in the management of cardiovascular morbidity and mortality in people with APS [7,8].

The condition of the patient was evaluated by Short Form-36 (SF-36) Health Survey (QOL - RAND 36-Item Health Survey – Version 1.0) [9,10]; Modified Fatigue Impact Scale (MFIS) [11,12]; visual analog scale (VAS) for pain; functional tests before and after completion of the course. The Short Form-36 (SF-36) measures patients' well-being and overall health along with functional abilities. The MFIS is a self-report questionnaire, which measures the impact of fatigue on cognitive, physical and psychosocial function. A visual analog scale (VAS) is designed to measure the intensity of pain in the form of a horizontal or vertical

line with a length of 10 cm.

Results

We reported a positive change in the clinical condition (reduction of the pain syndrome, reduction of swelling and morning stiffness) and subjective complaints of the patient. The results of the SF-36 one month after the start of the program showed an improvement in physical condition and mental health in all scales - Physical functioning, Role limitations due to physical health, Bodily Pain, General Health, Vitality, Social functioning, Role limitations due to emotional problems and Mental Health (Table 1). Fatigue changed from severe to mild (Table 2). Pain shows transition from very severe to mild (VAS before 8/10 – VAS after 2/10).

Table 1: Assessment results from SF-36.

Short Form-36 (SF-36) Health Survey*		
	Before	After
Physical functioning	15 / 100	75 / 100
Role limitations due to physical health	0 / 100	100 / 100
Role limitations due to emotional problems	0 / 100	100 / 100
Energy/fatigue	0 / 100	50 / 100
Emotional well-being	24 / 100	56 / 100
Social functioning	25 / 100	75 / 100
Pain	23 / 100	78 / 100
General health	40 / 100	50 / 100

*https://www.rand.org/health-care/surveys_tools/mos/36-item-short-form/survey-instrument.html

Table 2: Assessment results from MFIS.

Modified Fatigue Impact Scale (MFIS)		
	Before	After
Physical functioning (0-36)	31 / 36	9 / 36
Cognitive functioning (0-40)	10 / 40	1 / 40
Psychosocial functioning (0-8)	6 / 8	0 / 8
Total score (0-84)	48 / 84	10 / 84

Discussion

Physical and rehabilitation medicine with its large arsenal of therapeutic methods and means is widely used in patients with chronic diseases, as it focuses not only on solving a specific health problem, but is aimed at optimizing social participation and improving the quality of life of the individual as a whole when using a patient-oriented approach.

For patients with APS, it is important to optimally restore the functions of the affected organs and

systems with a view to adequate rehabilitation and prevention of disability. The multisystem involvement in APS implies a complex evaluation of the rehabilitation potential and analytical goal-oriented use of physical means, taking into account the contraindications for their application.

Conclusion

PMR methods and means should be considered in such rare clinical cases. The use of an individual approach, immediate monitoring and refined use of physical means in consideration of the higher thrombotic risk lead to an improvement of the quality of life in patients with APS with a positive impact on physical and mental health.

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Manuscript Information: Received: July 24, 2023; Accepted: September 13, 2023; Published: September 15, 2023

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Citation: Milanova H. Effect of physiotherapeutic treatment on the quality of life in a patient with antiphospholipid syndrome: A case report. *Open J Clin Med Case Rep.* 2023; 2114.

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