Three-year quality of life and its effect on functional limitation and anticoagulation adherence in patients with acute pulmonary emboli

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Introduction: Quality of life disturbance is among important consequences of acute pulmonary emboli (PE) which result in a long-standing mental burden affecting functional ability, social life and patients’ adherence to assigned treatment. However, the long-term effect of disturbed quality of life is poorly studied. Of note, many survivors are recommended to continue their antithrombotic regimen until “indefinite period” on which the effect of quality of life impairment is unknown.

Purpose: To report the 3-year changes in quality of life and its effect on functional limitation and anticoagulation adherence in patients with acute PE.

Methods: In our prospective registry, 170 consecutive patients with acute PE were recruited. Six-month clinical, imaging and functional status were previously published. In the current study, survivors were asked to participate in a 3-year structural follow up consisting of clinical examination, transthoracic echocardiography (including Pulmonary Embolism THrombolysis [PEITHO] right ventricle [RV] functional recovery), 6-minute walk test and quality of life assessment based on Pulmonary Embolism Quality of Life Questionnaire (PEmb-QoL). The use of antithrombotic drugs was also evaluated.

Results: Of the 170 registered patients, during the 3-year follow-up time, 37 (21.8%) died and 16 (9.4%) were lost to follow-up. 117 patients were followed clinically, of whom 73 patients (median age 49 (37-61) years and 29 (39.7%) were female) accepted to participated in the all steps of the structural follow up. 45 (61.6%), 25 (34.3%) and 3 (4.1%) patients have complete, incomplete and no RV recovery in the 3-year echocardiogram exam, respectively. Three-year median 6MWT was 400 (320-460) meters. 33 (45%) patients did not adhere to the instructed antithrombotic regimen. In 51 patients 6-month and 3-year Pem-QoL questionnaires were available. The mean PEmb-QoL scores improved overall and in all dimensions (Figure 1). Better quality of life was not associated with RV function recovery, 6MWT results or antithrombotic adherence.

Conclusion: Our study showed a significant improvement in quality of life in PE survivors followed for 3 years. QoL was not associated with echocardiographic parameters or 6-minute walking test.

Figure 1. PEmb-QoL scores at 6-month and 3-year follow-up intervals, dimension scores are transformed to a 0-100 scale with higher scores indicating worse quality of life; A. Distribution of PEmb-QoL dimension scores at 6-month and 3-year follow-up time. B. Mean percent of change in PEmb-QoL scores between 6-month and 3-year follow-up.

*P-value was obtained via non-parametric (Paired Wilcoxon) comparison of scores at 6-month and 3-year follow-up.

PEmb-QoL: pulmonary embolism quality of life; ADL: activities of daily living

PEmb-QoL in 6-month and 3-year Follow up