Functional outcomes and quality of life during long-term follow-up after acute pulmonary embolism: analysis of the prospective multicentre FOCUS study

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Background: It is unclear to which extent persistence of symptoms and/or residual haemodynamic impairment clinical course of pulmonary embolism are associated with worse quality of life (QoL).

Aims: To study the correlation between symptoms and haemodynamic impairment with QoL during the first year after acute pulmonary embolism (PE).

Methods: The Follow-Up after acute pulmonary embolism (FOCUS) study prospectively enrolled and followed consecutive adult patients diagnosed with acute symptomatic objectively diagnosed PE. In the present analysis, we considered patients who completed the Pulmonary Embolism QoL (PEmb-QoL) Questionnaire at predefined visits 3 and 12 months after acute PE. The PEmb-QoL score ranges from 0% (best QoL) to 100% (worst QoL). We evaluated at these two time points the correlation between persisting symptoms (group: symptoms), elevation of natriuretic peptides or residual right ventricular dysfunction (group: RVD), or their combination (group: symptoms + RVD) and QoL.

Results: A total of 617 patients were included; their median age was 62 years, 44% were women; 8% had active cancer, and 21% previous venous thromboembolism. At 3 months, patients with neither symptoms nor RVD (n=302) had the highest quality of life (median score 18%, 25th–75th percentile: 8%–34%), followed by those without symptoms but with RVD (n=255; median score 19%, 25th–75th percentile: 7%–34%), and by those with symptoms only (n=131; median PEmb-QoL 31%, 25th–75th percentile: 18%–49%). Patients with both symptoms and RVD (n=170) had the worst quality of life (median score 38%, 25th–75th percentile: 19%–53%); Figure 1A. At 12 months, we found an overall improvement of PEmb-QoL score. The degree of this QoL improvement varied across groups, being largest for patients who recovered from having symptoms + RVD at 3 months to normalization of at least one at 12 months. The change in QoL from 3 to 12 months was smaller both in patients who had neither symptoms nor RVD and in patients who had no recovery in either symptoms or RVD; Figure 1B.

Conclusions: Persistent symptoms after PE, especially in patients with elevated biomarkers or residual echocardiographic dysfunction, were the main drivers of QoL at 3 months as well as of the course of QoL over time.

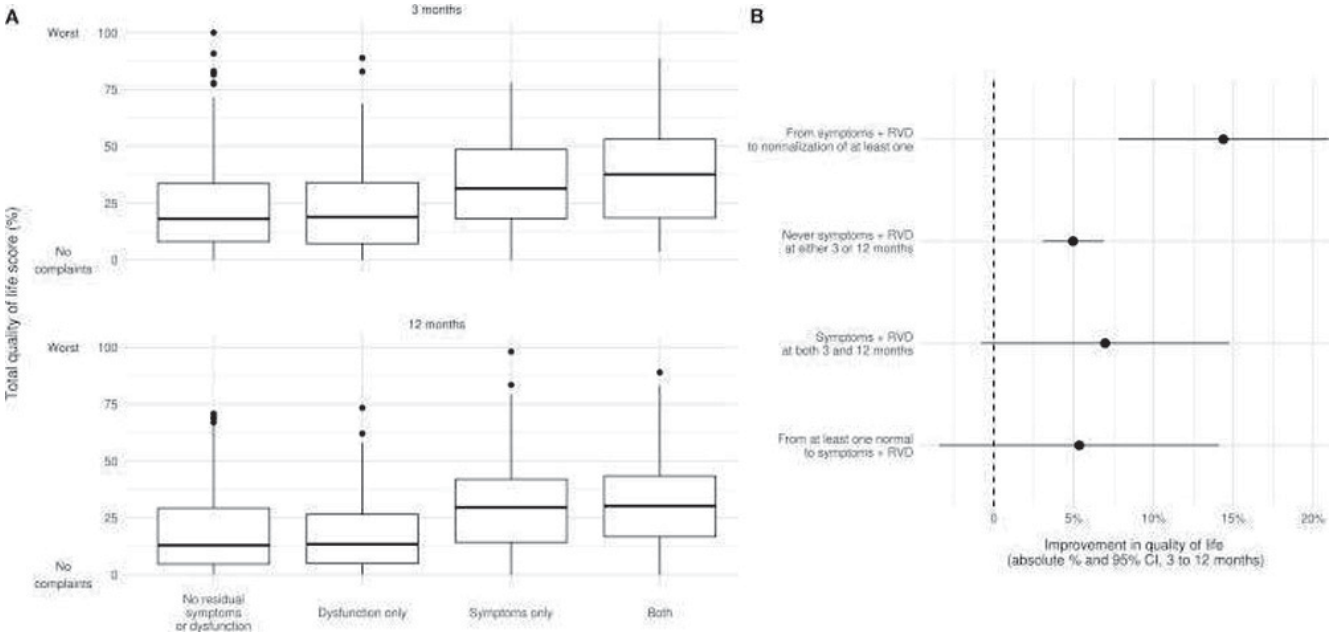

Figure 1