

# Prethymectomy plasmapheresis in myasthenia gravis

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摘要

## Abstract

Plasma exchange before thymectomy may decrease the time on mechanical ventilation (MV) and shorten the stay in the intensive care unit (ICU) for patients with myasthenia gravis (MG). This study evaluated the effects of prethymectomy plasmapheresis. A total of 29 myasthenic patients, 18 women and 11 men aged 20-73 years, were treated with double filtration plasmapheresis (DFP) for two to five consecutive sessions over a period between 2 and 21 days (mean 8.1 days) before transsternal thymectomy. Acetylcholine receptor antibody (AchRAb) titers, vital capacity (VC), maximal inspiratory pressure (Pimax), and MG score were measured before and after the course of DFP. Three outcome measures including duration of postoperative hospital stay, duration of ICU stay, and duration of MV were analyzed for correlation with clinical variables. The duration of MV ranged from 6 to 93 h, with a median of 21 h. The median ICU stay was one day and the median postoperative hospital stay was 10 days. A higher removal rate of AchRAb was associated with a shorter duration of ICU and postoperative hospital stay ( $P = 0.001$  and  $0.019$ , respectively). Postoperative hospital stay was strongly correlated with post-DFP Pimax ( $P = 0.010$ ), and marginally correlated with pre-DFP VC ( $P = 0.047$ ) and to a lesser extent with pre-DFP Pimax ( $P = 0.063$ ). Univariate analysis using the log rank test revealed that removal rate of AchRAb  $< 30\%$  ( $P = 0.043$ ) and pre-DFP Pimax  $< -60$  cmH<sub>2</sub>O ( $P = 0.024$ ) were significantly associated with prolonged ICU stay. Risk factors for prolonged postoperative stay included post-DFP Pimax  $< -60$  cmH<sub>2</sub>O ( $P = 0.017$ ), pre-DFP Pimax  $< -60$  cmH<sub>2</sub>O ( $P = 0.031$ ), and post-DFP VC  $< 1.0$ L ( $P = 0.046$ ). Our results confirmed the efficacy and safety of DFP in prethymectomy preparation for myasthenic patients.