

Importance of plasmapheresis in the therapy of drug-resistant myasthenia gravis

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Myasthenia gravis (MG) is an autoimmune disease characterized by impaired neuromuscular transmission caused by blocking of acetylcholine receptors on the postsynaptic membrane by specific circulating antibodies. MG is characterized by a variety of clinical symptoms and sometimes by severe respiratory complications up to coma. We describe the clinical case of a 54-year-old Chinese woman with generalized type of MG, admitted to our Internal Medicine Unit. In remote medical history the patient had been admitted to Cardarelli Hospital in Naples in January 2021 where she had received a diagnosis of Myasthenia Gravis with admission to intensive care and subsequent therapy with intravenous immunoglobulin with regression of symptoms. In November 2021 he presents severe respiratory insufficiency during the bronchopneumonia process and begins Non-Invasive Ventilation. Subsequently she was sent to Intensive Rehabilitation for rehabilitation with moderate recovery, however affected by an undercurrent SARS-CoV2 infection. He is hospitalized in March 2022 at our Internal Medicine Operating Unit of the Ospedale del Mare in Naples for an exacerbation of respiratory distress associated with dysphagia. She undergoes a tracheostomy. Therapy with Mestinon 60 mg cp, 1 cp x 4 / day and high dose

corticosteroids does not favor the recovery of severe dyspnoea with worsening of the neurological picture with tetra hyposthenia, hypotrophy and generalized weakness, more marked bilateral ptosis in OS, weakness of the neck muscles with inability to lift the head, respiratory failure with the need for NIV; absent posterior pharyngeal reflex resulting in dysphagia. He therefore practices immunoglobulins at high doses (400 mg / kg or 25 g / day / iv per day x 5 days) without any clinical benefit. It was then decided to start plasma apheresis: it was subjected to plasma exchange using a Fresenius cell separator. The procedure is carried out in the absence of side effects. Approximately 3000 ml of plasma equal to 1.5 TPV are exchanged in each session, replaced by an equal volume of 5% albumenised physiological solution. Only after the execution of 7 plasmaphereses was a significant clinical improvement such as to completely wean the patient from NIV and give indication for thymectomy surgery.

Conclusion

Plasmapheresis can be used not only in the treatment of myasthenia crisis, but also in the treatment of drug-resistant myasthenia gravis.