RESPIRATORY FAILURE IN PATIENT WITH TETANIC SYNDROME HYPOVITAMINOSIS RELATED

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Topic: Acute respiratory failure and mechanical ventilation

Introduction: Recently our group has found itself managing the case of a 25 year old girl suffering from a rare muscle channelopathy associated with tetanic crises and fibromyalgia. Since 2016 she has experienced spasmophilia with atypical asthma caused by multiple triggers. Tracheostomy in 2018. One year later, diagnosis of tetanus syndrome hypovitaminosis D3 related. Father suffering from multiple sclerosis and grandfather died for ALS. Channelopathies are characterized by an altered muscle excitability caused by the mutation of genes encoding the membrane channels. Specifically, it was a hypocalcemic tetany in which the peripheral skeletal muscles suddenly contract as a result of membrane depolarization phenomena due to increased sodium permeability triggered by plasma calcium levels when it becames 50% lower than normal ranges.

Method: The patient was admitted to our intensive care unit after repeated episodes of desaturation occurred at home. Domiciliary treated with O2 and sulfamethoxazole/ trimethoprim for Staphyloccoccus aureus positivity on sputum. The patient initially underwent mechanical ventilatory support and daily pharmacological treatment was managed with: Amicasil 1 g, Mepral 80 mg, Mineralslines Mg/K 1 cap, Soldesam 4 mg, Atenolol 200 mg, Flexiban 2 cap; Kcl retard 1 cap, Pineal Tens 1 sac, Calcium carbonate 2 cp and Neodidro 0.266 mg every 15 days.

Results: After 17 hours the patient returned to spontaneous breathing with O2 support and after two days she began a semi-solid diet. On the fifth day she begins targeted therapy with amikacin for positivity of Pseudomonas aeruginosa on BAL. Control chest x-ray revealed accentuated broncovascular marking. The patient was discharged at home on the eighth day in good general condition.

Conclusions: The obtained results support the use of central muscle relaxants, vitamin intake and the restoration of electrolyte homeostasis for channelopathies treatment.