

Efficacy of Cytosorb® in the treatment of hyperbilirubinemia in autoimmune cholestatic liver disease

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Introduction

Extracorporeal circulation techniques can support the liver in its detoxification function, removing toxic molecules of hepatic origin such as Bilirubin and Bile Acids from the blood. Cytosorb® represents first choice purification system for this therapeutic purpose.

Methods

We report the case of a 52-year-old patient, affected by Adenocarcinoma of the right lung with secondary lung, lymph node and brain lesions, treated with Cisplatin, Pemetrexed, Ipilimumab and Nivolumab. After the third cycle of therapy, hypertransaminasemia appeared (GOT 304 U/L, GPT 651 U/L, GGT 1347 U/L), hyperbilirubinemia (TBil 6.1 mg/dL, DBil. 4.36 mg/dL) and jaundice with positive autoantibodies (ANA 1:160 anti-SSA granular pattern) for which cortisone therapy was started. Liver biopsy showed findings compatible with DILI (Drug induced Liver Injury) with a cholestatic imprint. The patient came to our attention when, due to a progressive increase in bilirubinemia, apheresis treatment in an intensive care setting was indicated.

The patient was awake and cooperative, frankly jaundiced, breathing spontaneously in room air, hemodynamic stability without amine support.

Results

Blood tests: TBil 25.04 mg/dL, DBil 14.94 mg/dL, GOT 290 U/L, GPT 627 U/L, GGT 2265 U/L. An extracorporeal purification treatment in continuous hemodiafiltration (CRRT) with Cytosorb® was chosen. Treatment with Cytosorb® was carried out for 24 hours and showed an effective and progressive reduction in the values of Tbil and Dbil compared to the initial values (Tbil 16.52 mg/dL, Dbil 7.48 mg/dL). No adverse events were observed during the entire extracorporeal purification cycle.

Conclusions

The present case demonstrates the efficacy of Cytosorb® in reducing Bilirubin levels in cholestatic liver disease, with a trend that reflects the functioning of Cytosorb®, which has a concentration-dependent absorption capacity, which allows the target molecules to be effectively removed in the presence of high concentrations.