

Cappellano N, Convertini O, De Luca S, Grasso M, Nanna P, Vittorio A, Vitulli M, Di Masi P, Gabriele F.

Intensive Care Department of the IRCCS Hospital, Castellana Grotte (Bari), Italy

Introduction

Severe hyperbilirubinemia in patients with pancreatic cancer can increase the risk of perioperative complications, including liver failure, infections, and coagulation disorders. Conventional strategies for bilirubin reduction include endoscopic or percutaneous biliary drainage. However, in cases where these methods are not sufficiently effective, the use of Cytosorb represents an innovative therapeutic option. Cytosorb is the only certified adsorber for the removal of bilirubin, cytokines, myoglobin, Ticagrelor, and Rivaroxaban from whole blood and can lead to a significant improvement in clinical parameters.

Methods

A patient diagnosed with pancreatic head cancer had previously undergone endoscopic retrograde cholangiopancreatography (ERCP) with stent placement in the main bile duct (MBD) for biliary drainage. Despite the procedure, persistent hyperbilirubinemia was observed. Blood tests showed a total bilirubin level of 27.62 mg/dL and direct bilirubin of 24.16 mg/dL, while renal function was within normal limits. Due to persistent jaundice and the need for preoperative bilirubin reduction, the patient underwent a Cytosorb treatment cycle (two sorbents over 48 hours).

Results

Cytosorb treatment resulted in an intense reduction in bilirubin levels: total bilirubin level reaches the value of 15.98 mg/dL and direct bilirubin reaches the value of 14.13 mg/dL after adsorption (Figure 1). This reduction was sufficient to allow the patient to successfully undergo a duodenopancreatectomy the day after sorbent use.

Conclusion

In the case described, two Cytosorb cycles effectively reduced total and direct bilirubin levels, facilitating surgery under optimal conditions. Cytosorb treatment proved useful for bilirubin removal in patients with severe jaundice. Cytosorb represents an effective option for the preoperative management of jaundice in patients with pancreatic head cancer. In cases where biliary drainage is insufficient, this method can improve the patient's metabolic profile and optimize surgical outcomes.

Figure 1: total and direct bilirubin levels

