CR09 Cardiotoxicity caused by gemcitabine

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KEYWORDS: cardiotoxicity; chemotherapy; gemcitabine

INTRODUCTION/OBJECTIVES: The use of anticancer drugs leads to the development of various adverse effects, particularly cardiovascular complications. Cardiotoxic effects are awaited, using pyrimidine antimetabolites. Gemcitabine, though being a representative of pyrimidine antagonist group, is considered to have minimal cardiotoxicity. We present the case of a patient with pancreatic cancer and takotsubo syndrome on gemcitabine monotherapy.

CASE PRESENTATION: A 61-year-old female patient got treatment for stage IV T2N2M1 pancreatic tail cancer, adenocarcinoma G2 with peritoneal carcinomatosis, hepatic metastasis. She has no anamnesis of any cardiovascular disease. She was on monochemotherapy with Gemcitabine 1000 mg/m2 intravenously on days 1/8/15. She got the 1st cycle of chemo, which was well tolerated. Nevertheless, soon after the last 3rd infusion of the second cycle (1800mg) the patient's condition dramatically worsened (tachycardia, hypotension). Electrocardiography: paroxysmal atrial fibrillation with transient right bundle branch block (was treated by injection of amiodarone). Echocardiography: reduced left ventricular ejection fraction, right heart dilatation, tricuspid regurgitation. Cardiogenic shock was caused by acute cardiotoxicity. The patient's condition was stabilized; further condition was complicated by multiorgan ischemic injuries, which made further chemotherapy impossible.

CONCLUSION: Gemcitabine is considered to be minimally cardiotoxic compared to other members of the antimetabolite group. Our observation is a rare described case, however, the analysis of the literature allows to conclude that the rate of cardiotoxic reactions during gemcitabine therapy is comparable with other antitumor drugs. Only nonspecific electrocardiography changes can be detected during chemotherapy, which requires more attention to such patients. The use of anticancer antimetabolites necessitates careful monitoring of cardiovascular adverse events.

CR10 CHALLENGING MANAGEMENT OF SEVERE MYOCARDITIS WITH COMPLETE RECOVERY – a case report

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KEYWORDS: cardiogenic shock; extracorporeal membrane oxygenation; heart failure; myocarditis; ventricular assist device

INTRODUCTION/OBJECTIVES: Cardiogenic shock has a high mortality rate (up to 60%). Different respiratory and mechanical circulatory support (MCS) is sometimes needed in treating these critically ill patients. We present a young patient with severe acute myocarditis and cardiogenic shock successfully treated to full recovery which required different extracorporeal membrane oxygenation (ECMO) configurations and a percutaneous left ventricular assist device (LVAD).

CASE PRESENTATION: A previously healthy 21-year-old male was hospitalized in a local hospital after three weeks of intermittent fever, chest pain, cough and dyspnea. He was diagnosed with myopericarditis. Four days later his condition deteriorated to cardiogenic shock and cardiopulmonary arrest. He was successfully resuscitated and put on veno-arterial (VA) ECMO and mechanical ventilation (MV). Two days later he was transfered to our institution for further treatment. Echocardiography revealed severely reduced left ventricular (LV) ejection fraction (20%) and chest X-ray showed right-side pneumonia and "ECMO" lungs, confirmed by right-heart catheterization with severely elevated pulmonary capillary wedge pressure. A percutaneous LVAD was placed to unload LV. Thereafter, reconfiguration to V-A-V ECMO was required because of Harlequin syndrome development. Following sufficient recovery, ECMO was switched to V-V configuration. On 8th day of MCS he was weaned from ECMO, and from LVAD and MV the following day. His heart function and general condition recovered completely. On the 31st day of hospitalization he was discharged home.

CONCLUSION: Severe heart failure management may require different MCS systems. Intensive contemporary care and timely referral of selected patients to experienced centers can improve outcomes and save lives.