

Acute Mesenteric Ischemia after Heart Surgery

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Abstract

Introduction: Acute mesenteric ischemia (AMI) is a rare but very severe complication of heart surgery, due especially to the delay in setting the correct diagnosis and choosing the appropriate treatment. There are 4 types, but the most frequent is non-occlusive mesenteric ischemia (NOMI). The main mechanism is represented by great decrease or maldistribution of the splenic blood flow, with negative impact on the integrity of the intestinal mucosa, bacterial translocation and multiorgan failure.

Material and Method: We present a retrospective study conducted on patients who underwent open heart surgery with cardiopulmonary bypass with non-pulsatile flow. 4 cases of angiographically confirmed NOMI (non-occlusive mesenteric ischemia) were identified. When, based on clinical examination and laboratory findings, acute mesenteric ischemia was suspected, superior mesenteric artery angiography was performed via the femoral artery.

Results: The main risk factors were represented by: age over 70 years old, left ventricle ejection fraction (LVEF) < 35%, aortic clamping time > 100 min., chronic kidney failure, counter-pulsation balloon implant, inotropic medication use, like levosimendan, use of blood components > 1 unit of erythrocyte mass. Clinical signs were nonspecific. All patients presented hypoventilation, arterial hypotension, oliguria and, from a biological standpoint, metabolic acidosis and leucocytosis. Superior mesenteric artery angiography was the investigation method of choice. Treatment approach was initially medical, followed by resection of the intestine. Mortality was 100%.

Conclusions: Acute mesenteric ischemia is a rare but very severe complication in cardiac surgery. It is primordial that the main risk factors be known, and in case of diagnosis suspicion, that it be set as early as possible, along with immediate initiation of an appropriate course of treatment.

Key words: acute mesenteric ischemia (AMI), non-occlusive acute mesenteric ischemia (NOMI), cardiopulmonary bypass (CPB), metabolic acidosis, superior mesenteric angiography, intestinal resection

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