

Serotonin Syndrome After Methylene Blue Administration: A Case Report

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ABSTRACT

INTRODUCTION

Serotonin syndrome is a potentially fatal toxidrome that commonly present in the emergency departments. It is usually caused by medications or drug interactions that increase the level of serotonin in the nervous system that produce surplus amount of serotonin receptor activities.

CASE REPORT

A 61-year-old man with history of ischemic cardiomyopathy with left ventricular assist device presented to the emergency department due to low flow alarms from his device. He was admitted for an open heart transplant and device removal. During the procedure, because of hemodynamic instability, he was given methylene blue to improve his blood pressure. During the post-operative period, he developed serotonin syndrome most likely triggered by the methylene blue and its interactions with his home antidepressants. He was appropriately managed through supportive care and benzodiazepine.

CONCLUSION

Methylene blue has potential to cause serotonin syndrome when patients have a history of taking other serotonergic agents. Understanding the toxidrome, the common serotonergic agents involved, the clinical presentation, and the appropriate treatment is of utmost importance to achieve the best outcomes for patients. It is important for emergency physicians to consider this diagnosis with altered patients, especially when they have history of polypharmacy and on serotonergic medications.