ORAL PRESENTATIONS

[ID-O#093] Methylene blue for refractory vasoplegic, toxic shock: The HATS experience

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Objectives: Methylene blue (MB) has been recommended as a potential therapy for refractory vasoplegic shock in poisoning. The relative rarity of this scenario has meant that efficacy and safety data are scarce. We sought to describe the experience of MB use as a pressor within a tertiary referral toxicology service in Australia.

Methods: The Hunter Area Toxicology Service database (HATS) was searched for presentations treated with MB from 2014 to 2024. Any cases involving non-vasoplegic use of MB were excluded. Data extracted included age, gender, toxins ingested, treatments used, disposition, outcome, hospital length of stay and any complications occurring.

Results: Five cases were identified within the HATS database during the study period, 4 were inpatient Toxicology admissions and one was a consult from another facility. There were 3 males, 2 females, and age range was 51 to 71 years. Vasoplegia was secondary to dihydropyridine-angiotensin axis agent combined ingestion in 3 cases, sole ingestion of slow release diltiazem in 1 case and quetiapine ingestion in another. All patients received noradrenaline and vasopressin infusions prior to administration of MB and 2 patients received other treatments targeted at improving vasoplegia. One case (consult) had a pulmonary artery catheter inserted which documented an increase in systemic vascular resistance post MB. One patient died. Length of stay ranged from 1.9 to 24 days in the survivors, one patient developed significant serotonin toxicity attributed to the MAOI activity of MB. Further details in Table 1.

Conclusion: Refractory vasoplegic shock was uncommon, however MB does appear to demonstrate some efficacy. The potential for a serotonin reuptake/MAOI interaction is however a concern in a poisoned population. In addition, this small case series reemphasizes the potential for combined dihydropyridine/angiotensin axis ingestions to lead to vasoplegia.