

Sodium Nitroprusside and Acute Psychosis in the Emergency Department

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Dear Editor,

Sodium nitroprusside (SNP) has been used clinically for the treatment of severe hypertension since 1929 (1). Having vasodilatory effects on both arterioles and venules, it is available for intravenous administration in cases of acute hypertensive crises. Furthermore, this medication has been used in different fields of medicine such as esophageal varices (2), severe pyrexia (3), lactic acidosis (4), neuroleptic malignant syndrome (5), and cerebral vasospasm (6). Adverse effects of SNP usage include bradyarrhythmias, tachyarrhythmias, hypotension, restlessness, confusion, and a less common yet dreaded complication, cyanide and thiocyanate toxicity. SNP is known to produce nitric oxide in the brain, increase cGMP production, and modulate NMDA receptor activity (7). Although the precise underlying mechanism remains unclear, SNP is able to halt psychosis-like behaviors. Consequently, low-dose SNP over the course of four hours was recently proposed as a treatment for acute psychosis (8). Administration of SNP as an effective adjuvant therapy for acute psychosis in the emergency departments, despite being novel and attractive, does require further attention and considerations. When used in combination with other psychiatry drugs, which have potential to decrease blood pressure, SNP administration might be associated with decrease in blood pressure and instability in hemodynamics even at low recommended doses. The main characteristic of SNP is hypotension; hence, if physicians opt for SNP administration for the treatment of acute psychosis, the emergency department setting does not seem to be an appropriate environment. It would be more logical to use SNP in ICU settings with closer hemodynamic monitoring and to have more appropriate information on the fluid status, central venous pressure, and in situ central venous lines; therefore, if instabil-

ity occurs following SNP administration, resuscitation of the patients could be performed safely and without any undesirable delays.

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Authors' Contributions

AM: literature Review, Manuscript Drafting, Editing manuscript; SEJG: Editing Manuscript; KKZ: Literature review; TAK: Editing Manuscript; AHF: Manuscript drafting.

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