

## Acute myocardial infarction and cocaine toxicity: One step closer

Sir,

The article by Sarkar *et al.*,<sup>[1]</sup> is indeed interesting and timely as practitioners and emergency physicians have started seeing cases of cocaine intoxication in India. However, a few aspects of this paper require contemplation. The authors have administered thrombolytic agent initially for cocaine associated myocardial infarction (CAMI) which is not congruent with current evidence.<sup>[2]</sup> Current literature questions the routine use of thrombolytic therapy for patients with CAMI and there are reports of severe complications associated with thrombolytics in cocaine users.<sup>[3]</sup> The frequent presence of contraindications to thrombolysis, including severe hypertension, seizures, intracerebral hemorrhage, and aortic dissection in cocaine abusers precludes the liberal use of thrombolytic agents. Moreover, the standard electrocardiographic criteria (ST elevation) for thrombolytic therapy is hampered by the high rate of abnormal or nondiagnostic electrocardiogram (ECG)'s in patients presenting with cocaine associated chest pain. The guidelines issued by American College of Cardiology and American Heart Association<sup>[4]</sup> advocate the use of thrombolytic therapy in CAMI only if ST segments remain elevated despite nitroglycerin and calcium antagonists and coronary angiography is not possible.

Secondly, the recent cocaine use can alter the specificity of cardiac biomarkers and making them difficult to interpret in CAMI, especially the serum creatinine kinase level is not a reliable indicator of myocardial injury and is increased in almost half of cocaine users irrespective of concurrent MI possibly because of cocaine-induced hyperthermia, increased skeletal muscle activity, and rhabdomyolysis.<sup>[5]</sup> The awareness of reliability of cardiac biomarkers in cocaine associated chest pain is warranted for effective management. The American Heart Association recommends nitroglycerin and benzodiazepines as first-line agents for cocaine associated chest pain. Benzodiazepines are administered especially in cocaine-addicted patients with associated hypertension, tachycardia, or anxiety after the cocaine use. Intuitively, dexmedetomidine, a central sympatholytic agent is highly

effective in reversing the cocaine's sympathomimetic actions.<sup>[6]</sup> Substance abuse remains one of the major public health issues across the globe, despite health education on prevention; the incidence of illicit substances is escalating. Since many patients with cocaine toxicity will present with chest pain to the emergency department, it is essential that these patients be recognized early and managed appropriately to prevent complications.

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