Letters to the Editor

Expert Consensus Document on Beta-Adrenergic Receptor Blockers and Cocaine Use

To the Editor:

Cocaine use has risen exponentially in all European countries, particularly Spain and the United Kingdom, with a prevalence of users per capita very similar to that of the United States.\(^1\) The fact that cocaine use has become more widespread among Spanish youth is a matter of major concern.\(^2\)

As a result, the number of users treated in hospital emergency rooms for medical problems resulting from acute intoxication,\(^1\) such as chest pain,\(^1\) has increased. The extent of the problem in terms of chronic effects, particularly cardiovascular effects,\(^5\) remains to be seen; these effects are likely to be associated with coronary disease.\(^6,7\)

We have read with interest the consensus document on the use of beta-blockers written by a task force of the European Society of Cardiology and published in the Revista Española de Cardiología,\(^8\) and would like to point out that no mention was made that these medications are contraindicated when an acute cardiac condition coexists with cocaine intoxication or overdose.

In the case of acute coronary syndrome associated with cocaine use, vasospasms worsen in hypertensive patients treated with propranolol.\(^8,9\) Labetalol and esmolol are not effective, and alpha-adrenergic stimulation may actually exacerbate vasospasm with propranolol.\(^9\) Hence, benzodiazepines, nitroglycerin, and aspirin are recommended as first-line drugs. Alpha-adrenergic receptors (phentolamine) and calcium blockers (verapamil) would be used for second-line hypertension therapy.\(^10,11\) In cases of ST segment elevation, primary percutaneous coronary angioplasty is recommended over fibrinolysis, which has a higher incidence of coronary vasospasm and a greater risk of bleeding in other organs.\(^4\)

As toxicologists and emergency room physicians, we consider that the attending physician should take this contraindication into consideration not only in patients first seen for an acute coronary syndrome, but also in patients whose clinical condition deteriorates after initiating standard treatment that includes beta-blockers.\(^12\)

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Response

To the Editor:

Cocaine use has increased at an alarming rate, with the attendant increase in cardiovascular complications. Acute coronary syndrome related to the use of cocaine (or crack) can...
concerned reader can find highly specific recommendations in the most recent guidelines of the American Heart Association/American College of Cardiology. Nevertheless, these recommendations are based on logic, and not on clinical evidence, which is nonexistent. Antiplatelet therapy is essentially the same, and nitroglycerin is the preferred drug to treat acute ischemia or possible hypertension. Tachycardia is treated preferentially with diltiazem or verapamil. When there is persistent pain with ST segment elevation, emergency catheterization is recommended (due to potential coronary occlusion secondary to thrombosis, rather than spasm). Thrombolytic therapy is recommended if catheterization cannot be performed within 90 minutes. Careful use of beta-blockers in patients with hypertension and sinus tachycardia is recommended if the patient is also receiving nitrates or calcium blockers (IIb, evidence C). According to the same reasoning, it is also inadvisable to administer beta-blockers to stable patients who occasionally or regularly use cocaine, regardless of whether they have heart disease.

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