

Before reaching for the nitroglycerin...Ask!

Giving nitrates, such as nitroglycerin, to a patient suffering from chest tightness or chest pain may cause significant hypotension if the patient has recently ingested Viagra®, Cialis® or Levitra®.

Viagra® (sildenafil), Cialis® (tadalafil) and Levitra® (vardenafil) are selective phosphodiesterase type-5 (PDE-5) inhibitors prescribed for erectile dysfunction. They increase cGMP in the corpus cavernosum thereby promoting blood flow to the cavernous spaces. Nitroglycerin also increases cGMP levels. The combined, additive effect produces a marked relaxation of vascular smooth muscle resulting in a significant drop in the systolic and diastolic blood pressure. This hypotensive effect has been shown in cohorts of healthy male volunteers, published case reports and in a case recently reported to the Maryland Poison Center.

Nitroglycerin is therefore contraindicated in patients who are treated with PDE-5 inhibitors. Other nitrates such as isosorbide mononitrate, isosorbide dinitrate, pentaerythritol tetranitrate and sodium nitroprusside are also contraindicated. In addition, it is unclear how long after taking a PDE-5 inhibitor it would be safe to give a nitrate. The preferred agents for chest pain in these patients would be opioid analgesics and antiplatelet agents.

If hypotension occurs, promptly stop the nitrate therapy, place the patient in the Trendelenberg position, and institute aggressive fluid therapy. In patients with severe hypotension, vasopressors should be considered.

Remember to ask about any previous PDE-5 inhibitor use when treating a patient with chest pain!

DID YOU KNOW THAT...some herbal erectile dysfunction products might contain sildenafil?

These products are being marketed as dietary supplements and are sold via the internet and in health food stores. Some have been determined to contain prescription-strength sildenafil or tadalafil. A drastic drop in blood pressure is likely to occur if nitrates are given to patients taking these products. Include herbal and dietary supplements when taking a drug history before giving nitrates.

