Olprinone: A Phosphodiesterase III Inhibitor with Positive Inotropic and Vasodilator Effects

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ABSTRACT

Olprinone is a newly developed phosphodiesterase III inhibitor characterized by several properties. First, olprinone has positive inotropic and vasodilator actions and improves myocardial mechanical efficiency. Second, olprinone augments cerebral blood flow by a direct vasodilatory effect on cerebral arteries. The cerebrovascular reactivity to olprinone is marked in patients with impaired cerebral circulation. Third, olprinone selectively improves carotid artery distensibility, which may be attributable to differences in the arterial structural components or the reactivity of smooth muscle cells to olprinone. Fourth, olprinone improves inadequate redistribution of brain perfusion and may prevent cerebral metabolic abnormalities in heart failure.