

TABLE 2

ADVERSE DRUG INTERACTIONS IN DENTISTRY: VASOCONSTRICTORS.

POSSIBLE DRUG INTERACTION	CUMULATIVE RATING*	MECHANISM AND CLINICAL PRESENTATION
Vasoconstrictor with tricyclic antidepressant (levonordefrin with imipramine)	1	Sympathomimetic effects may be enhanced. Epinephrine should be used cautiously; use of levonordefrin should be avoided.
Vasoconstrictor with nonselective β -adrenoceptor antagonist (epinephrine with propranolol)	1	Hypertensive and/or cardiac reactions are possible. Vasoconstrictor should be used cautiously; blood pressure and heart rate should be monitored.
Vasoconstrictor with general anesthetic (epinephrine with halothane)	1	Increased possibility of cardiac arrhythmias exists with some general anesthetics. Consultation with anesthesiologist is recommended.
Vasoconstrictor with cocaine (epinephrine with cocaine)	1	Arrhythmias and hypertensive responses possible. Concurrent use should be avoided.
Vasoconstrictor with antipsychotic or other α -adrenoceptor blocker (epinephrine with chlorpromazine)	4	Hypotension resulting from overdose of antipsychotic agent may be worsened. Vasoconstrictor should be used cautiously.
Vasoconstrictor with adrenergic neuronal blocker (levonordefrin with guanadrel)	4	Sympathomimetic effects may be enhanced. Vasoconstrictor should be used cautiously.
Vasoconstrictor with local anesthetic (lidocaine with epinephrine)	4	Multiple effects on systemic toxicity, which may be self-limiting.
Vasoconstrictor with thyroid hormone (epinephrine with thyroxine)	4	Summation of effects possible when thyroid hormones are used in excess. Vasoconstrictor should be used cautiously if signs of hyperthyroidism are present.
Vasoconstrictor with monoamine oxidase inhibitor (epinephrine with phenelzine)	5	No substantial evidence of an interaction.

* This rating system was described previously.¹⁶ See Table 1.

action. Additional injections then may be safely given 30 minutes later.

According to the rating scale adopted by Moore and colleagues¹⁶ for this series of articles (Table 1), the tricyclic-vasoconstrictor interaction rates a 1 (Table 2) because it is "established" and is "potentially life-threatening or capable of causing permanent injury."⁷

β -ADRENERGIC ANTAGONISTS

β -adrenergic receptor antagonists (otherwise known as

β -adrenoceptor blockers or, more simply, β -blockers) are prescribed for a variety of conditions: acute panic symptoms, angina pectoris, cardiac dysrhythmias, essential tremors, glaucoma, hypertension, hyperthyroidism, hypertrophic subaortic stenosis, migraine headache, myocardial infarction and pheochromocytoma. They act by competitively blocking the stimulation of β receptors by endogenous catecholamines such as epinephrine and norepinephrine. They also block β -receptor activation by exogenously adminis-

tered adrenergic drugs. β -blockers can be categorized by their specificity of action: propranolol (Inderal, Wyeth-Ayerst) and nadolol (Corgard, Bristol-Myers) are examples of nonselective β -blockers, which block both β_1 and β_2 receptors; atenolol (Tenormin, ICI Pharma) and metoprolol (Lopressor, Geigy) represent drugs with β_1 -selective antagonistic effects.

Although the ability of β -blockers to counter the cardiac effects of adrenergic drugs has been known for more than four decades, it became widely ap-