

ACTIVE LEARNING TEMPLATE: *Medication*

STUDENT NAME _____

MEDICATION Dobutamine

REVIEW MODULE CHAPTER _____

CATEGORY CLASS Adrenergic

PURPOSE OF MEDICATION

Expected Pharmacological Action

Stimulates beta1(myocardial)-adrenergic receptors with relatively minor effect on heart rate or peripheral blood vessels.

Therapeutic Use

Short-term (<48 hr) management of heart failure caused by depressed contractility from organic heart disease or surgical procedures.

Complications

CNS: headache.
Resp: shortness of breath.
CV: hypertension, increased heart rate, premature ventricular contractions, angina pectoris, arrhythmias, hypotension, palpitations.
GI: nausea, vomiting.
Local: phlebitis.
Misc: hypersensitivity reactions including skin rash, fever, bronchospasm or eosinophilia, nonanginal chest pain.

Contraindications/Precautions

Contraindicated in: Hypersensitivity to dobutamine or bisulfites; Idiopathic hypertrophic subaortic stenosis.

Use Cautiously in: History of hypertension (increased risk of exaggerated pressor response); MI; Atrial fibrillation (pretreatment with digitalis glycosides recommended); History of ventricular atopic activity (may be exacerbated); Hypovolemia (correct before administration); Pregnancy or lactation (safety not established).

Interactions

Drug-Drug: Use with nitroprusside may have a synergistic effect on increasing cardiac output.
Beta blockers may negate the effect of dobutamine.
Increased risk of arrhythmias or hypertension with some anesthetics (cyclopropane, halothane), MAO inhibitors, oxytocics, or tricyclic antidepressants.

Evaluation of Medication Effectiveness

Increase in cardiac output.
Improved hemodynamic parameters.
Increased urine output.

Medication Administration

Intravenous

Nursing Interventions

Monitor BP, heart rate, ECG, pulmonary capillary wedge pressure (PCWP), cardiac output, CVP, and urinary output continuously during the administration.

Report significant changes in vital signs or arrhythmias. Consult physician for parameters for pulse, BP, or ECG changes for adjusting dose or discontinuing medication.

Palpate peripheral pulses and assess appearance of extremities routinely throughout dobutamine administration. Notify physician if quality of pulse deteriorates or if extremities become cold or mottled.

Client Education

Explain the rationale for instituting this medication and the need for frequent monitoring.

Advise patient to inform nurse immediately if chest pain; dyspnea; or numbness, tingling, or burning of extremities occurs.

Instruct patient to notify nurse immediately of pain or discomfort at the site of administration.

Home Care Issues: Instruct caregiver on proper care of IV equipment.

Instruct caregiver to report signs of worsening HF (shortness of breath, orthopnea, decreased exercise tolerance), abdominal pain, and nausea or vomiting to health care professional promptly.