Repeat morphine administration.

IV, Intravenous.

TABLE 23-4
Selected Shunt Procedures for Children with Cardiac Defects

Shunt Type	Comments
Modified Blalock-Taussig shunt: Subclavian artery to pulmonary artery using Gore-Tex or Impra tube graft	Shunt flow sometimes excessive, requiring use of diuretics
	Possibility of thrombosis; aspirin usually prescribed postoperatively
	Easy to ligate at time of definitive correction
	Shunt size fixed and may become too small as child grows
Sano modification: Right ventricular to pulmonary artery using Gore-Tex	Prevents diastolic runoff of systemic blood into the pulmonary arteries
	Provides a higher diastolic BP and seemingly better coronary perfusion
	Used in place of the Modified Blalock-Taussig shunt in the Norwood procedure
Central shunt: Ascending aorta to main pulmonary artery using Gore-Tex graft	Length of shunt acts to restrict blood flow; possibility of symptoms of HF; diuretic therapy sometimes required
	Uncommon; used when modified Blalock-Taussig shunt cannot be used
	Easy to insert and remove at time of repair
	Possibility of thrombosis; aspirin usually prescribed postoperatively
Bidirectional Glenn shunt (cavopulmonary anastomosis): SVC to side of right pulmonary artery; blood flow to both lungs	Done as a second shunt; often used as a staging step to a Fontan procedure
	Can be incorporated into eventual modified Fontan procedure
	Relieves severe cyanosis and decreases volume overload on ventricle
	Carries risk of embolic events (mixing defect); aspirin often prescribed
	Pulmonary arteriovenous fistulas may occur months or years later, causing desaturation (uncommon finding)

BP, Blood pressure; *HF,* heart failure; *SVC,* superior vena cava.