

# PROCEDURE

ORIGINAL DATE: 12/93

Revised Date: 09/02

**SUBJECT: GANCYCLOVIR SODIUM, ADMINISTRATION OF**

**PURPOSE:** To safely administer IV Gancyclovir (DHPG, Cytovene) in the home.

## GENERAL INFORMATION

An antiviral agent that stops cytomegalovirus from multiplying. Does not destroy existing viruses but stops them from reproducing and invading healthy cells. May allow a weakened immune system to defend the body against the CMV infection. May also be inhibitory against herpes simplex virus 1 and 2, Epstein-Barr virus, and varicella zoster virus, but clinical studies have not been done. Onset of action is prompt, and therapeutic levels are maintained for 3-6 hours with some drug remaining 11 hours after infusion.

Widely distributed in tissues and blood fluids. Probably crosses the placental barrier. Suspected to be secreted in breast milk. Over 90% excreted unchanged in urine by glomerular filtration in patients with normal renal function.

## Indication and Uses

Treatment of CMV retinitis in immunocompromised individuals, including patients with AIDS. CMV disease prevention in at-risk transplant patients. Gancyclovir should not be administered to patients who are on zidovudine (both cause granulocytopenia). Gancyclovir is incompatible with any other drug in syringe or solution because of alkaline pH. Precipitation may occur if pH is altered.

The most common side effects of gancyclovir are:

Granulocytopenia	Thrombocytopenia	Anemia
Rash	Abnormal Liver Function Tests	Phlebitis
Infection	Pain at IV site	Fever

## CONSIDERATIONS

1. LPN's may not administer IV Gancyclovir.
2. Patients must receive initial dose of gancyclovir in the hospital or medical setting.
3. Gancyclovir must be on an infusion pump or Dial-A-Flow gravity tubing.
4. Central venous access is the recommended route of administration since gancyclovir will cause severe tissue irritation if infiltration occurs.
5. Suggested lab work will include: CBC with differential, platelet count, creatinine, and creatinine clearance prior to initiating therapy. Serum creatinine or creatinine clearance every two weeks, CBC with differential and platelets every week.
6. Weights will be monitored every week. Any changes will be reported immediately to physician.

## INDUCTION AND MAINTENANCE

CMV retinitis: 5 mg/kg body weight every 12 hours for 14-21 days. Begin maintenance dose the next day (day 15-11) of 5 mg/kg daily for 7 days each week or 6 mg/kg daily for 5 days each week. If retinitis progressed during maintenance regimen, initiate the twice daily program. Treatment continues as long as patient is immunocompromised.

Necessary Equipment	
Gancyclovir as ordered	Heparin flush syringe
Dose-A-Flow tubing <u>or</u> infusion pump and appropriate tubing	Sharps container
2 saline flush syringes	Gloves
Alcohol prep pads	Needleless adapter system

<i>Procedure</i>	<i>Rationale</i>
1. Perform baseline assessment and review lab data. Hold dose and contact physician if neutrophils are less than 500 cells/mm <sup>3</sup> and/or platelets less than 25,000 cells/mm <sup>3</sup> .	Drug will cause further granulocytopenia and/or thrombocytopenia.
2. Check and review orders for gancyclovir	To prevent medication errors.
3. Attach needleless injection cap to hub of catheter (see appropriate policy).	To provide appropriate injection port.
4. Set up gancyclovir on Dial-A-Flow gravity system or infusion pump (see appropriate policy) to deliver dose/volume ordered and rate of infusion.	A single dose must be administered at a constant rate over 1 hour as an infusion. Excessive plasma levels and toxicity will occur with too-rapid rate.
5. Attach needleless adapter to end of tubing.	
6. Wipe injection cap with alcohol prep pad.	To minimize catheter-related infections.
7. Flush catheter with appropriate amount of normal saline.	
8. Attach tubing into needleless injection cap.	To prevent accidental dislodging of tubing from catheter
9. Begin infusion and monitor patient for adverse reactions.	
10. Document.	
11. When gancyclovir infusion is completed, remove tubing from needleless injection cap.	
12. Wipe injection cap with alcohol prep pad and flush with saline and then heparin as ordered.	

**NOTE:** Gancyclovir is a nucleoside analog; follow guidelines for handling and disposal of cytotoxic agents.