Cisplatin

What names may be used for this medication?

Cisplatin, cis-diamminedichloroplatinum (CDDP), Platinol

How and why is this medicine given?

Cisplatin is given by an intravenous (IV) infusion (a slow drip through a needle into your port or through a vein in your arm or hand) or infused intraperitoneal (IP; into your abdominal cavity by a special port placed in your abdominal wall) to treat many different types of cancers. Your doctor will determine the most appropriate route of administration to treat your cancer. We use cisplatin most commonly in our office for the treatment of cervix, ovarian, and uterine cancers. It may be used by itself or combined with other chemotherapy drugs.

How does the medicine work?

Cisplatin binds to your body’s DNA (the machinery or “brain” that runs each cell) causing damage that prevents the DNA from replicating, which prevents the cell itself from reproducing. Cisplatin is not able to discriminate between good cells and cancer cells, so it can affect many parts of your body besides the cancer. Since non-cancer cells are better than the cancer cells at repairing the damage caused by cisplatin, the cancer cells die and your normal cells repair the damaged DNA so they can resume their normal function. The side effects you experience from cisplatin are a result of this damage prior to your healthy cells having a chance to repair themselves. This medicine is also sometimes used with radiation to help the radiation work “better.”
Cisplatin is cleared from your body through the kidneys. The kidney’s filtering process prevents the drug from staying in your body too long and causing excessive damage to the normal cells. It is therefore important that you keep yourself well hydrated (8-10 glasses of water per day) in efforts to keep the kidneys working at their best. We will monitor your kidney’s function through blood tests performed prior to each treatment cycle. We will also review your list of medications that you take for other medical problems (diabetes, blood pressure, etc.) at each visit to be sure that none of these other medicines are interfering with clearing the cisplatin from your body.

How often is this medicine given?

Cisplatin is typically given once every 3-4 weeks (every 21-28 days), but may occasionally be given weekly (every 7 days). The most appropriate route of administration and total number of treatments recommended will vary based on your clinical circumstances, but an initial plan will be outlined for you by your doctor. The infusions are given in the infusion center at the Cancer and Research Center (white building located across the parking lot from our office). Prior to each treatment, you will be seen in the office for an exam, and blood tests will be reviewed to be sure it is safe to administer your next treatment. It is, of course, very important to keep all of your appointments for chemotherapy and lab testing.

What side effects does this medicine cause?

There are many possible side effects of all chemotherapy drugs, so the following is only inclusive of the most common or serious possibilities from cisplatin. You will be asked to complete a symptom form at each visit in order for us to accurately assess the side effects that you may be experiencing. This form helps your doctor be sure that no adverse effects of treatment are overlooked, and it serves to help you recall which symptoms you may have experienced since your last treatment.

- Hair loss is minimal with cisplatin, but some patients do experience more hair loss than others. Hair growth should return upon completion of treatment.
- Nausea and vomiting are not unusual but are less common today than in the past because of much improved anti-nausea medications. Nausea may present immediately or not present until a few days after treatment, so we tend to recommend anti-nausea medications for several days whether or not you have symptoms. You will be given prescriptions for medications to prevent nausea, and it is important that you take them as directed in order for them to be most effective. If you have questions, do not hesitate to call the office.

- Nerve toxicity is seen patients taking cisplatin. This side effect is dose related, so the higher your dose of cisplatin and the longer you receive cisplatin, the higher the likelihood is that you will develop some neurotoxicity. Numbness, tingling, burning, or pain in your hands or feet may be signs of nerve injury. Please report these symptoms if present at your next office visit. These symptoms may or may not resolve after stopping treatment.

- Ototoxicity is damage to the ears/hearing caused by cisplatin. This results in a high frequency hearing loss and ringing in the ears (tinnitus). This may affect as many as 30% of patients receiving cisplatin. If you think you may be developing some ototoxicity, be sure to report it at your next office visit so that we can arrange for hearing (audiology) testing.

- Bone marrow suppression is uncommon with cisplatin but can occur. This is when the bone marrow cannot make enough red cells, white cells, or platelets to keep up with demand. All of your blood counts will be monitored regularly throughout treatment.
  - **Anemia** is the result of not enough red blood cells and may cause fatigue, chest pain, shortness of breath, or dizziness.
  - **Neutropenia** results when your white blood cell count goes too low, and this will put you at an increased risk for infection. It is very important that you avoid sick friends and family; be diligent about hand-washing as well. This does not mean that you cannot be out in public, and in fact you can continue to participate in normal activities such as going to church or a movie, etc. If you think you may have an infection or have a fever of 100.5°F or more, call the office immediately.
  - **Thrombocytopenia** is the term for too low of a platelet count. This can lead to excessive bruising or bleeding with only minor injury such as brushing your teeth or blowing your nose.
Kidney failure is uncommon but possible with cisplatin. Some dysfunction of the kidneys does occur however in as many as 40% of patients and leads to electrolyte abnormalities such as low potassium and/or magnesium—this is usually reversible. It is important for you to drink plenty of fluids (8-10 glasses/day) to keep your kidney function at their best. As an extra precaution, we often suggest that our patients receiving cisplatin return to the infusion center for additional intravenous hydration and electrolyte supplementation for a few days following chemotherapy; this will be discussed by your doctor if appropriate for your situation. We will also monitor your kidney function closely throughout treatment.

*Mucositis* is sores/ulcers in the mouth that can cause pain and difficulty eating or swallowing. This uncommon but can occur with cisplatin. This can be minimized with good oral hygiene and a warm salt-water solution gargled after each meal. Prescription medication is also available if these steps are ineffective at resolving your symptoms.

Allergic reactions to cisplatin are unusual but can occur. This typically presents during the infusion with a rash/hives, itching, low blood pressure, and/or shortness of breath.

Cisplatin can cause problems with fertility. It is not uncommon to stop having periods while receiving cisplatin, but these typically return to normal after stopping treatment. Your doctor will discuss this in more detail if applicable to you.

If you are pregnant or become pregnant during therapy, you should notify your doctor immediately.