Cisplatin (Platinol®)

Pronounced: SIS-plat-in
Classification: Platinum Coordination Complex

About Cisplatin

Cisplatin is a heavy metal compound that inhibits synthesis of RNA, DNA, and protein in cells. All of these compounds are vital for cells to divide and grow. By preventing them from dividing, the medication can stop the cancer from growing.

How to Take Cisplatin

Cisplatin is given through intravenous (IV, into a vein) infusion. The dose and schedule is determined by the person's size and type of cancer. It can be given alone or with other drugs.

This medication can affect the blood levels certain anti-seizure medications. Be sure to tell your healthcare provider about all medications and supplements you take.

Possible Side Effects

There are a number of things you can do to manage the side effects of cisplatin. Talk to your doctor or nurse about these recommendations. They can help you decide what will work best for you. These are some of the most common side effects:

Kidney and Liver Function Changes

Your doctor may perform blood tests to check your liver and kidney function, as these can be affected by cisplatin. Call your doctor or nurse immediately if you have abdominal pain, if your urine becomes dark, or if your skin or the whites of your eyes become jaundiced (yellow in color).

Hearing Loss

Cisplatin can cause hearing loss. Call your doctor or nurse if you have ringing in your ears or if you notice a decrease in your hearing.

Low White Blood Cell Count (Leukopenia or Neutropenia)

White blood cells (WBC) are important for fighting infection. While receiving treatment, your WBC count can drop, putting you at a higher risk of getting an infection. You should let your doctor or nurse know right away if you have a fever (temperature greater than 100.4), sore throat or cold, shortness of breath, cough, burning with urination, or a sore that doesn't heal.

Tips to preventing infection:

- Washing hands, both yours and your visitors, is the best way to prevent the spread of infection.
- Avoid large crowds and people who are sick (i.e.: those who have a cold, fever or cough or live with someone with these symptoms).
- When working in your yard, wear protective clothing including long pants and gloves.
- Do not handle pet waste.
- Keep all cuts or scratches clean.
- Shower or bath daily and perform frequent mouth care.
- Do not cut cuticles or ingrown nails. You may wear nail polish, but not fake nails.
- Ask your doctor or nurse before scheduling dental appointments or procedures.
- Ask your doctor or nurse before you, or someone you live with, has any vaccinations.

Low Red Blood Cell Count (Anemia)

Your red blood cells are responsible for carrying oxygen to the tissues in your body. When the red cell count is low, you may feel tired or weak. You should let your doctor or nurse know if you experience any shortness of breath, difficulty breathing or pain in your chest. If the count gets too low, you may receive a blood transfusion.

Low Platelet Count (Thrombocytopenia)

Platelets help your blood clot, so when the count is low you are at a higher risk of bleeding. Let your doctor or nurse know if you have any excess bruising or bleeding, including nose bleeds, bleeding gums or blood in your urine or stool. If the platelet count becomes too low, you may receive a transfusion of platelets.

- Do not use a razor (an electric razor is fine).
- Avoid contact sports and activities that can result in injury or bleeding.
- Do not take aspirin (salicylic acid), non-steroidal, anti-inflammatory medications (NSAIDs) such as Motrin®, Aleve®, Advil®, etc. as these can all increase the risk of bleeding. Unless your healthcare team tells you otherwise, you may take acetaminophen (Tylenol).
- Do not floss or use toothpicks and use a soft-bristle toothbrush to brush your teeth.

Nausea and/or Vomiting

Talk to your doctor or nurse so they can prescribe medications to help you manage nausea and vomiting. In addition, dietary changes may help. Avoid things that may worsen the symptoms, such as heavy or greasy/fatty, spicy or acidic foods (lemons, tomatoes, oranges). Try antacids, (e.g. milk of magnesia, calcium tablets such as Tums), saltines, or ginger ale to lessen symptoms.

Call your doctor or nurse if you are unable to keep fluids down for more than 12 hours or if you feel lightheaded or dizzy at any time.

Diarrhea

Your oncology team can recommend medications to relieve diarrhea. Also, try eating low-fiber, bland foods, such as white rice and boiled or baked chicken. Avoid raw fruits, vegetables, whole grain breads, cereals and seeds. Soluble fiber is found in some foods and absorbs fluid, which can help relieve diarrhea. Foods high in soluble fiber include:

applesauce, bananas (ripe), canned fruit, orange sections, boiled potatoes, white rice, products made with white flour, oatmeal, cream of rice, cream of wheat, and farina. Drink 8-10 glasses on non-alcoholic, un-caffeinated fluid a day to prevent dehydration.

Electrolyte Changes

Your doctor may order blood tests to check your electrolytes. If needed, the doctor may prescribe supplements, such as magnesium or potassium.

Peripheral Neuropathy (Numbness or Tingling in the Hands and/or Feet)

Peripheral neuropathy is a toxicity that affects the nerves. It causes a numbness or tingling feeling in the hands and feet, often in the pattern of a stocking or glove. This can get progressively worse with additional doses of the medication. In some people, the symptoms slowly resolve after the medication is stopped, but for some it never goes away completely. You should let your healthcare provider know if you experience numbness or tingling in the hands and feet, as they may need to adjust the doses of your medication.

Taste and Smell Changes

You may experience a metallic taste or find that food has no taste at all. You may dislike foods or beverages that you liked before receiving cancer treatment. These symptoms can last for several months or longer after treatment ends. Avoid any food that you think smells or tastes bad. If red meat is a problem, eat chicken, turkey, eggs, dairy products and fish without a strong smell. Sometimes cold food has less of an odor. Add extra flavor to meat or fish by marinating it in sweet juices, sweet and sour sauce or dressings. Use seasonings like basil, oregano or rosemary to add flavor. Bacon, ham and onion can add flavor to vegetables. Ask your nurse about nutritional counseling services to help with food choices.

Vision Changes

This medication can cause blurred vision and a change in color perception, especially with higher doses or increased frequency of doses. Report any vision changes to your healthcare team immediately.

Allergic Reactions

In some cases, patients can have an allergic reaction to this medication. Signs of a reaction can include: shortness of breath or difficulty breathing, chest pain, rash, flushing or itching or a decrease in blood pressure. If you notice any changes in how you feel during the infusion, let your nurse know immediately. The infusion will be slowed or stopped if this occurs. Depending on the severity of your reaction, you may still be able to receive the medication with a pre-medication to prevent a reaction, or if the medication is given at a slower rate.

Loss or Thinning of Scalp and Body Hair (Alopecia)

Your hair may become thin, brittle, or may fall out. This typically begins two to three weeks after treatment starts. This hair loss can be all body hair, including pubic, underarm, legs/arms, eyelashes, and nose hairs. The use of scarves, wigs, hats and hairpieces may help. Hair generally starts to regrow soon after treatment is completed. Remember your hair helps keep you warm in cold weather, so a hat is particularly important in cold

weather or to protect you from the sun.

Reproductive Concerns

Exposure of an unborn child to this medication could cause birth defects, so you should not become pregnant or father a child while on this medication. Effective birth control is necessary during treatment Even if your menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. You should consult with your healthcare team before breastfeeding while receiving this medication.

If you have questions or concerns about the medication that you have been prescribed, please contact your healthcare team. OncoLink is designed for educational purposes only and is not engaged in rendering medical advice or professional services. The information provided through OncoLink should not be used for diagnosing or treating a health problem or a disease. It is not a substitute for professional care. If you have or suspect you may have a health problem, you should consult your health care provider.

A Phase III Comparison of Standard Radiation Therapy (RT) Versus RT Plus Concurrent Cisplatin (CDDP) Versus Split-Course RT Plus ConcurrentCDDPP and 5-Flourouracil (5-FU) in Patients with Unresectable Squamous Cell Head and Neck Cancer (SCHNC): An Inter

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Background:
Unresectable squamous cell carcinoma of the head and neck region conotates a very poor prognosis overall. Recent Phase II trials have suggested the addition of concurrent chemotherapy to radiation therapy may improve survival. This study was performed to compare standard radiation therapy to concurrent chemotherapy and radiation therapy for unresectable squamous cell carcinoma of the head and neck.

Materials and Methods:

- Head and neck Intergroup trial of patients with Stage III and IV unresectable

squamous cell carcinoma of the head and neck (nasopharynx, paranasal sinus, and parotid primaries excluded.

- There were three treatment arms:
  - Arm A - Since daily fractionated RT (70 Gy/day @ 2 Gy/day)
  - Arm B - Identical Radiation with concurrent CDDP (100mg/m^2 x 3 q 3 wk
  - Arm C - Split course of RT and 3 cycle of concurrent chemotherapy, 30 Gy given with the first and 30-40 Gy given with the third cycle (chemo q 4 weeks 75 mg/m^2 DDP & 5-FU 1000 mg/m^2/day X 4)
- Due to declining accrual, the study was prematurely closed after 295 of planted 369 patients were enrolled. There were 273 patients eligible for evaluation. The median follow up was 25 months.

Results:

- Grade 3 toxicity of worse occurred in 54% Arm A patients versus 87% Arm B, and 77% Arm C ($p < 0.001$)
- 3 year projected survivals are 20% Arm A, 36% Arm B, and 28% Arm C
- Median survivals are 12.6 months Arm A, 18.8 months Arm B, and 14.0 months Arm C
- A significant improvement in survival was found only for Arm B ($p = 0.02$)

Authors' Conclusions

- In poor prognosis unresectable Squamous Cell Carcinoma of the head and neck:
  a. Concurrent chemotherapy and RT can be safely administered with acceptable toxicity
  b. The addition of concurrent high-dose single- agent DDP to conventional standard Rt significantly improved survival
  c. The use of multi-agent chemotherapy does not offset the loss of efficacy resulting from split- course RT

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