

---

## Hypersensitivity reaction to carboplatin followed by reaction to cisplatin

**H**ypersensitivity reactions have been reported to carboplatin. Carboplatin has a black box warning: "Anaphylactic-like reactions may occur within minutes of administration. Epinephrine, corticosteroids, and antihistamines may alleviate symptoms."<sup>1</sup> Several reports have indicated switching to cisplatin without the complications of a hypersensitivity reaction.<sup>2-4</sup>

### Case report

Our patient, a 49-year-old man with a history of sulfonamide allergy, was treated for non-small cell carcinoma of the lungs. The patient presented with a malignant pleural effusion, shortness of breath, and right hilar adenopathy. He was treated with paclitaxel and carboplatin. During his sixth cycle of chemotherapy, the patient developed dyspnea and angioneurotic edema, with thickness of the lips and hypoxemia (89% on

room air). His facial swelling, especially about the lips, was dramatic. This reaction occurred one fourth of the way through a 700-mg carboplatin infusion. The patient was treated with oxygen via nasal cannula, diphenhydramine (25 mg IV), and methylprednisolone (25 mg IV) and was taken to the hospital by ambulance. The episode resolved.

The patient subsequently developed mediastinal and worsening hilar adenopathy and was started on radiation therapy and weekly cisplatin. He tolerated the first 2 weeks of cisplatin treatment well but on the third week developed coughing spasms during a cisplatin infusion. On the fourth week of cisplatin therapy, the patient developed a severe hypersensitivity reaction to the drug. His symptoms included severe dyspnea, bronchospasm, hypoxemia (blood oxygen saturation, 86% on room air), and tachycardia. The patient was in acute distress. He

© 2005 Elsevier Inc. All rights reserved.

continued on **page 326**

## Platin hypersensitivity

continued from page 324

was treated with methylprednisolone, diphen-hydramine, and subcutaneous epinephrine (1:1000). The patient showed a dramatic improvement after epinephrine administration.

### Cross-sensitivity to platins

We believe this patient had a hypersensitivity reaction to both carboplatin and cisplatin. Although others<sup>2-4</sup> have reported safely administering cisplatin to carboplatin-allergic patients, we recommend caution in so doing. Cisplatin also has a black box warning: "Anaphylactic-like reactions have occurred. Facial edema, bronchoconstriction, tachycardia, and hypotension may occur within minutes of cisplatin administration. Epinephrine, cortico-

steroids, and antihistamines have been effectively employed to alleviate symptoms."<sup>5</sup> Nursing and medical personnel should be on standby with epinephrine and other medications in the event of an untoward occurrence. Reviewing anaphylaxis protocols prior to administering cisplatin to a carboplatin-allergic patient would be in order. Since these types of reactions are rare in a chemotherapy treatment facility, there may be a reluctance to give epinephrine to a patient having a reaction that is accompanied by tachycardia; however, epinephrine is the mainstay of therapy.<sup>6</sup>

Daniel J. Morris, MD  
Barbara Carr, RN, OCN  
Naples Community Hospital  
Naples, Florida

### References

1. Drug Facts and Comparisons. 59<sup>th</sup> ed. Chicago, Ill: Wolters Kluwer Health; 2005:2400.

2. Ottaiano A, Tambaro R, Gregg S, et al. Safety of cisplatin after severe hypersensitivity reactions to carboplatin in patients with recurrent ovarian carcinoma. *Anticancer Res* 2003;23:3465-3468.

3. Libra M, Sorio R, Buanadonna A, et al. Cisplatin may be a valid alternative approach in ovarian carcinoma with carboplatin hypersensitivity: report of three cases. *Tumori* 2003;89:311-313.

4. Shukunami K, Kurokawa T, Kawakami Y, Kubo M, Kotsuji F. Hypersensitivity reaction to carboplatin during treatment for ovarian cancer: successful resolution by replacement with cisplatin. *Tumori* 1999;85:297-298.

5. Drug Facts and Comparisons. 59<sup>th</sup> ed. Chicago, Ill: Wolters Kluwer Health; 2005:2403.

6. The Washington Manual of Medical Therapeutics. 30<sup>th</sup> ed. Philadelphia, Pa: Lippincott Williams and Wilkins; 2001; 244.

We'd like to hear from you. Please send your instructive case reports, commentaries, and other brief communications to Randi Gould, Managing Editor, [randi.gould@biolc.com](mailto:randi.gould@biolc.com).