

## FEATURE ARTICLE

# Ocular Changes With Oxaliplatin

Denise O'Dea, ANP, OCN®, Catherine M. Handy, PhD, RN, AOCN®, and Ann Wexler, MD

Ocular toxicity, although uncommon, can occur with many chemotherapeutic agents. Platinum compounds have been documented to produce a variety of ocular side effects, and reports have been made of ocular toxicity with oxaliplatin. This article reports on four patients who experienced ocular symptoms while receiving oxaliplatin. The symptoms included tunnel vision and visual loss with postural changes. One patient had objective findings that included papilledema. All of the changes were reversible. Oxaliplatin will continue to be used widely, so clinicians treating patients with it must be alert for unusual toxicities such as those described in this article.

Ocular side effects of chemotherapy are relatively rare but have been documented with a wide variety of agents. Although rare, they should be considered serious because of the potential for loss of vision. A review by Cloutier (1992) documented ocular toxicities potentially related to all classes of chemotherapeutic agents. Therefore, healthcare professionals must be alert for the unusual toxicities, particularly when working with new agents.

Patients should be asked about the presence of visual disturbances. When patients report visual disturbances, their healthcare providers should take a careful history and perform a thorough assessment of vision and visual fields. Bickley (2003) described the assessment to include examination of

- Visual acuity, with tools such as the Snellen eye chart or handheld card
- Visual fields
- The position and alignment of the eyes
- The eyelids, inspecting for edema, redness, lesions, conditions and directions of the eyelashes, and the adequacy with which eyelids close
- The lacrimal apparatus, inspecting for swelling and excessive tearing or dryness
- The conjunctiva and sclera, inspecting for color, vascular pattern, nodules, or swelling
- The cornea, lens, and iris for opacities
- The pupils for size, shape, and symmetry
- The extraocular muscles
- The optic disc and retina using an ophthalmoscope.

Abnormalities detected on examination may need to be evaluated further by an ophthalmologist.

## Ocular Toxicities

### Pathophysiology

Vision can be affected in a variety of ways. In addition to trauma, infection, and exposure to foreign objects or chemicals, diseases intrinsic to the eyes such as glaucoma and cataracts can

### At a Glance

- ◆ Ocular toxicity, although uncommon, can occur with many chemotherapeutic agents.
- ◆ A variety of ocular changes have been seen with platinum compounds. Ocular toxicity also has been reported with oxaliplatin.
- ◆ With any new agents, healthcare professionals must be alert to unusual toxicities that may not have been noted in clinical trials.

impact vision. Neurologic diseases affecting the areas of the brain that are devoted to vision can produce eye symptoms as well. Genetic disorders and acquired diseases often affect the eyes. Finally, eyes can be affected by medications (Fauci et al., 1998). For example, Pavan-Langston (1996) listed potential ocular toxicities for many classes of drugs. Allopurinol can cause retinal hemorrhages, papilledema, and diplopia, among other toxicities (Pavan-Langston). The cephalosporins have been associated with color vision defects and visual hallucinations (Pavan-Langston). Likewise, narcotics can cause visual hallucinations as well as dry eyes and myopia (Pavan-Langston). They are agents commonly used in the care of patients with cancer and, therefore, warrant attention.

Side effects of medications affecting the eyes can occur from systemic treatments and treatments for local, ophthalmic problems. The adverse effects vary from mild and transient to severe

Denise O'Dea, ANP, OCN®, is an oncology nurse practitioner, Catherine M. Handy, PhD, RN, AOCN®, is an oncology clinical nurse specialist, and Ann Wexler, MD, is a fellow in medical oncology, all at St. Vincent's Comprehensive Cancer Center in New York, NY. Handy is on the speakers bureau for Sanofi-Aventis. (Submitted November 2004. Accepted for publication August 1, 2005.)

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