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New Eye Treatment May Save Premies' Sight

Cancer drug better than laser for reducing risk of blindness, researchers report

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WEDNESDAY, Feb. 16 (HealthDay News) -- A new study holds potentially good news for preterm infants who develop an eye condition that may cause blindness: An inexpensive drug appears to do a better job of treating the condition than the existing therapy.

Just 4 percent of babies treated with the cancer drug Avastin suffered a recurrence of retinopathy of prematurity, a disease that harms the retina. By contrast, it recurred in 22 percent of those who received laser treatment to combat the condition, which is the most common cause of blindness in infants.

The treatment, given by injection in the eye, costs \$40 for both eyes and doesn't need an eye doctor on hand, making it a good option for poor countries where the disease is more common, said study author Dr. Helen A. Mintz-Hittner, a pediatric ophthalmologist at the University of Texas Health Science Center at Houston.

"You're paying \$40 for a pair of eyes for 80 years," Mintz-Hittner said, referring to the lifespan of patients who may avoid blindness. "You can't get much more bang for your buck than that. It's really a major advance."

Retinopathy of prematurity most commonly occurs in babies born extremely prematurely who receive oxygen treatment after birth. In some cases, babies get too much oxygen and the lungs fail to deliver it properly to the body, depriving tissues in the developing eye, explained Dr. James D. Reynolds, chair of the department of ophthalmology at the University at Buffalo, who wrote a commentary accompanying the study.

"We try the best we can to duplicate the in-utero conditions, but obviously we cannot," he said. As the baby grows after birth, the developing eye can be damaged as blood vessels grow abnormally; the retinas detach in some of the infants months after birth and may result in blindness.

Laser treatment can stop the progress toward blindness, but it also may cause infants to lose peripheral vision and suffer from poor overall vision, Mintz-Hittner said. As adults, "they're not able to see off to the side, they have very thick glasses, and it's hard for them to drive," she said.

The study is published in the Feb. 17 issue of the *New England Journal of Medicine*.

Avastin (bevacizumab), is best known as a chemotherapy drug, but it's also used to treat eye disease. The researchers tested either the drug or laser therapy on 143 infants and found that it worked well on babies with one type of the disease.

The drug works by blocking the abnormal growth of blood vessels, Reynolds said. "We are going to save some babies who would have gone blind with the laser treatment," Reynolds said. "It will change the patterns of practice overnight."

Timing of the injections is critical to the drug's success, the authors noted, and more research is necessary to determine the appropriate dose for different forms of the disease.

The U.S. Food and Drug Administration recently announced a plan to rescind its conditional approval of Avastin for treating breast cancer after serious side effects were noted in some patients and recent studies failed to show survival benefit.

Addressing safety concerns, the authors of this study said no ill effects were seen and that the dose used in the eye is only a fraction of that needed for cancer treatment.

However, because of the small size of their study, they recommend ongoing monitoring of children injected with Avastin to watch for any systemic effects.

The study was funded by the Research to Prevent Blindness, the U.S. National Eye Institute and other non-industry sources.

More information

For more about [retinopathy of prematurity](#), see the U.S. National Library of Medicine.

SOURCES: Helen A. Mintz-Hittner, pediatric ophthalmologist, University of Texas Health Science Center at Houston; James D. Reynolds, M.D., chair, Department of Ophthalmology, University at Buffalo. Feb. 17, 2011, The New England Journal of Medicine

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