Chemotherapy drug shrinks brain tumors

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Cancerous brain tumors appear to respond favorably to the drug temozolomide when used as primary chemotherapy after surgery, and the treatment appears to work best in people missing a certain gene, according to a study published in the May 22, 2007, issue of *Neurology*, the scientific journal of the American Academy of Neurology.

Researchers studied 149 people with low grade gliomas, a slow-growing type of brain tumor, who were treated with temozolomide chemotherapy for up to 30 months.

The study found temozolomide reduced the size of brain tumors in 53 percent of the study's participants and stabilized the size of brain tumors in 37 percent of the study's participants. However, in 10 percent of the group, the size of the brain tumors increased by more than 25 percent.

Genetic testing was also performed in 86 of the participants. In 42 percent of the participants, the gene 1p/19q was missing. Those missing the gene were more likely to respond well to the drug. They also had more months without the tumor developing than those with the gene and were less likely to die during the study.

"Our findings are consistent with previous smaller studies showing temozolomide as a primary treatment is effective and tolerable, and an added benefit is the discovery that the loss of chromosome 1p/19q predicts how well a person is going to respond to the treatment," said study author Khe Hoang-Xuan, MD, PhD, with the Pitie-Salpetriere Hospital in Paris, France.

However, Hoang-Xuan says comparing temozolomide to radiotherapy, which is the standard treatment for such brain tumors, isn't easy and he says that's why continued research into comparing the two treatments is needed.

Source: American Academy of Neurology