

Mesothelioma: Chemo Combination Improves Survival In Asbestos-related Cancer

ScienceDaily (Feb. 11, 2007) — People with mesothelioma -- a form of cancer associated with asbestos exposure -- have a higher survival rate when treated with a combination of two cancer drugs, a large multicenter study finds.

Mesothelioma, a rare but aggressive form of cancer that occurs in the lining of the lungs, heart and abdomen, is associated with exposure to asbestos. There is no known cure.

In the study, patients receiving pemetrexed and cisplatin -- along with the vitamin supplements folic acid and B12 -- survived nearly three months longer than patients getting cisplatin alone.

Researchers led by John Green, M.D., at the Clatterbridge Center for Oncology in England, reviewed a study of 448 patients with advanced mesothelioma who were treated with either the single drug or the combination.

"Pemetrexed used in combination with cisplatin significantly increases the length of survival, when compared with cisplatin alone," the researchers say. "Further research is needed into the optimum treatment regimen for pleural mesothelioma."

The review appears in the current issue of *The Cochrane Library*, a publication of The Cochrane Collaboration, an international organization that evaluates medical research. Systematic reviews draw evidence-based conclusions about medical practice after considering both the content and quality of existing medical trials on a topic.

The researchers examined data from a clinical trial of 20 treatment centers in Europe, the Americas, Australia and Asia. Eighty-one percent of the patients were men, with an average age of 61. Patients who received the combination treatment survived an average 2.8 months longer.

Patients receiving both medications also reported improved quality of life in terms of fatigue, loss of appetite, pain and cough.

During the early stages of the trial, patients receiving pemetrexed had serious symptoms of toxicity, including drug-related death. Other side effects included blood cell abnormalities, nausea and diarrhea, which decreased in both incidence and severity after the vitamins were added to the treatment. People who work trades such as shipbuilding, railway engineering, construction work and asbestos manufacture have higher rates of mesothelioma than the general public. The cancer may take 10 to 60 years to develop, and the risk does not diminish after exposure to asbestos has stopped. Family members of people exposed to asbestos at work also have an increased risk of developing mesothelioma from asbestos fibers carried home on the clothes of the people they live with.

Daniel Baram, M.D., a pulmonologist at the Lung Cancer Evaluation Center at the State University of New York, said, "Most cases [of mesothelioma] are still from pre-OSHA workplace improvements. I suspect that modern asbestos abatement precautions will avoid most, if not all, future cases. The latency is over 30 years, so we are still diagnosing cases with exposure during World War II and the '40s and '50s."

Mesothelioma is difficult to diagnose, Green said, because "there is a lag of many years between exposure and asbestosis, which is a nonmalignant condition, and a greater lag before the development of overt malignancy."

"There is no way of diagnosing the premalignant phase during the latent period of 15 to 20 years," Green added. "Many of these patients smoke and are in economically disadvantaged communities. Many individuals have moved away from heavy industries and may not admit or know they were exposed to asbestos as young men, with similar issues for their partners."

According to the U.S. Environmental Protection Agency, 10 percent to 15 percent of schools and other public buildings in the United States contain asbestos insulation.

Although safety measures for working with asbestos have been in place since the 1970s, mesothelioma is projected to account for 65,000 deaths between 2001 and 2050 worldwide, peaking between 2012 and 2015, according to background information in the review.

It is a personal matter as to whether the survival increase for patients receiving the two drugs is worthwhile, Baram said. "It depends in large part on the patient. A 2.8-month mean survival increase means that some patients may get even more than that, though some people will get less. Many, if not most, patients when faced with a disease with a very bad prognosis are often willing to undergo aggressive therapy, although the toxicity is serious and potentially life-threatening."

Green J, et al. Pemetrexed disodium in combination with cisplatin versus other cytotoxic agents or supportive care for the treatment of malignant pleural mesothelioma. Cochrane Database of Systematic Reviews 2007, Issue 1.

The Cochrane Collaboration is an international nonprofit, independent organization that produces and disseminates systematic reviews of health care interventions and promotes the search for evidence in the form of clinical trials and other studies of interventions.