Statin Use Associated with Reduced Risk of Pancreatic and Esophageal Cancers

Cholesterol-lowering statins are associated with a more than 50 percent reduction in the risk of pancreatic and esophageal cancers, according to new research.

Statins are primarily used to lower LDL or “bad” cholesterol and to prevent heart attacks and cardiovascular disease. Previous studies have shown that statins have an impact on cancerous cells by limiting tumor growth in human and animal models. However, the potential benefits of statin use in protection against cancer have not been explored extensively.

It has been known for some time that statins provide significant benefit to patients at risk for heart related conditions, and new research suggests that these compounds may have health benefits that extend well beyond the heart and may affect the entire body.

Statins Reduce the Risk of Pancreatic Cancer in Humans: Half A Million U.S. Veterans’ Case Control Study (Abstract 420) and Statins Reduce the Incidence of Esophageal Cancer: A Study of Half a Million U.S. Veterans (Abstract 622)

Two case-controlled studies examined the correlation between statin use and pancreatic and esophageal cancer incidence in the same cohort of U.S. veterans. Researchers reviewed the Veterans’ Integrated Service Network (VISN 16) database, which contains information on all veterans cared for under the South Central VA Health Care Network from October 1998 to June 2004. Of the 484,226 patients included in the study, 92 percent were men at a mean age of 61.2 years, 475 had pancreatic cancer and 659 had esophageal cancer. Approximately 34 percent were taking statins.

In one study, investigators found that the use of statins (HMG-CoA Reductase Inhibitors), such as fluvastatin and lovastatin, was associated with a 59 percent reduction in the risk of pancreatic cancer. In the second study, the team found that statin use was associated with a 56 percent reduction in the risk of esophageal cancer.

Risk factors of esophageal cancer, including Barrett’s esophagus, were not included in the analysis. In both study arms, researchers controlled for age, gender, smoking, alcohol use and diabetes. However, dose, duration and the nature of particular medications were not factored into either analysis.

Researchers involved in the study note that these results should be interpreted with caution given the limitations of the population, the database and the retroactive design of the study.

“This research suggests that statins may play a role in preventing pancreatic and esophageal cancers,” said Vikas Khurana, M.D., lead study author from the Overton Brooks VA Medical Center in Shreveport, L.A. “Although much confirmatory research still needs to be done, we hope this will encourage the medical community to further examine statins and their potential benefits in cancer prevention.”

Pancreatic cancer is considered one of the most deadly forms of cancer; an estimated 27,000 patients are diagnosed each year, with close to 100 percent succumbing to the disease within the year. Esophageal cancer is three to four times more common among men than women and about 50 percent more common among African Americans than whites. Because esophageal cancer is usually diagnosed at a late stage, most people with the disease eventually die.

In 2005, 14,520 Americans will be diagnosed with esophageal cancer and 13,570 will die from the disease.

New Procedures More Accurate in Early Diagnosis of GI Cancers

Researchers have developed two new tests that are more accurate than current technologies in the early diagnosis of important gastrointestinal cancers.

Serum Proteomic Fingerprints for Diagnosis of Gastric Cancer (Abstract 476)

Although stomach cancer is the world’s second most deadly cancer, the medical community has yet to identify a reliable gastric tumor marker that would identify individuals genetically predisposed to cancer or individuals in the early stages of the disease. Researchers from the Chinese University of Hong Kong examined the ability of SELDI ProteinChip technology to accurately diagnose gastric cancer. This tool categorizes proteins and creates a unique “fingerprint” to diagnose cancer. This fingerprint represents a series of protein masses that can
be used to differentiate between normal and diseased patient samples. Results of the study have demonstrated that serum proteomic fingerprinting may be a highly accurate diagnostic marker for gastric cancer.

The three-part study consisted of finding potential diagnostic markers and developing and validating a diagnostic model. Researchers analyzed the profiles of 38 gastric cancer patients and 29 healthy control patients and found that the identified fingerprints were significantly more prevalent in the cancer group.

Researchers examined 31 proteomic features and used five with a tumor-specific nature to calculate the accuracy of the diagnostic model. Comparing 40 gastric cancer patients and 20 healthy subjects, results showed that diagnostic gastric cancer was diagnosed 73 percent of the time using this model.

“This type of proteomic profiling may have the capacity to identify novel biomarkers for the screening and early detection of gastric cancer,” said Wai K. Leung, M.D., lead study author from the Chinese University of Hong Kong.

Confocal Endomicroscopy as a Novel Method to Diagnose Colitis Associated Neoplasias in Ulcerative Colitis: A Prospective Randomized Trial (Abstract 483)

In treating ulcerative colitis (UC), a chronic inflammation of the large intestine, timely diagnosis of precancerous lesions and colitis-associated colon and rectal tumors (CRC) is of crucial importance. Both are serious and potentially life-threatening complications to UC. Scientists from the University of Mainz in Germany investigated the efficacy of chromoendoscopy (CE) in conjunction with confocal endomicroscopy in the detection and *in vivo* diagnosis of precancerous lesions and CRC. Chromoendoscopy is the topical application of stains or pigments to improve images during endoscopy. Confocal endomicroscopy is an imaging technique that illustrates intact tissue in significant detail by scanning a laser and restricting the light path. Researchers found that the combination of CE and confocal endomicroscopy is more effective in the monitoring of UC than standard colonoscopy.

Researchers divided 153 patients suffering from long-term UC in clinical remission into two groups, with one group receiving a conventional colonoscopy and the other group receiving a panchromoendoscopy (staining of the entire colon) using 0.1 percent methylene blue, a dye used to highlight tumors, along with an endomicroscopy to detect precancerous lesions and CRC.

With an average examination time of 42 minutes, chromoendoscopy in conjunction with endomicroscopy identified significantly more precancerous lesions than the standard colonoscopy. Chromoendoscopy identified lesions with more accuracy, which allows for more targeted biopsies of relevant lesions and may lead to significant improvements in the clinical management of UC patients.

“Precancerous lesions and colorectal carcinoma are two significant impediments in the monitoring and treatment of ulcerative colitis,” said Ralf Kiesslich, M.D., of the University of Mainz. “By using chromoendoscopy in conjunction with confocal endomicroscopy, physicians are able to more effectively diagnose these conditions based on targeted biopsies of potentially cancerous areas. This early detection may help save lives.”

Biofeedback Better Than Drug Treatment for Common Type of Constipation

Researchers at the University of North Carolina at Chapel Hill conducted a study of patients who suffer from a type of constipation that affects up to 4 percent of adults in the U.S. population. The problem is the result of the “bad habit” of inappropriately contracting muscles in the pelvic floor when attempting a bowel movement, according to Steven Heymen, MS, who presented the study. The condition, called “pelvic floor dyssnergia-type constipation” occurs in people of all ages, but females are significantly more likely to be affected. Patients were randomly assigned to three treatment groups: 1) Biofeedback; 2) Muscle relaxant medication; or, 3) Placebo pill. All of the patients were trained in muscle coordination exercises designed to relieve the problem as part of their treatment protocol. Using biofeedback devices, patients were able to “see” on a computer monitor when the muscles were tensed, and when they were relaxed. Constipation was successfully relieved in 71 percent of patients in the biofeedback group, compared to 20 percent who took a muscle relaxant and 33 percent who took a placebo.