

Biodegradable gel being studied as a treatment for esophageal cancer

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Gastroenterologists at Rush University Medical Center are studying the safety and efficacy of a new system for delivering chemotherapy for patients with esophageal cancer, a rare, but deadly disease that attacks the throat. The unique drug therapy delivers a highly concentrated dose of chemotherapy injected directly on to the hard-to-reach tumors in the esophagus non-surgically. Researchers at Rush are trying to determine if the gel treatment can reduce the size of the cancerous tumors.

Patients diagnosed with [esophageal cancer](#) are usually diagnosed at very advanced stages and not only have to undergo chemoradiation therapy, but may also have an esophagectomy, which is a surgical procedure to remove a part of or the entire esophagus.

"[Patients](#) with esophageal cancer have very few treatment options and life expectancy can be less than two years from first diagnosis," said Dr. Sohrab Mobarhan, principal investigator of the study and clinical director of the Coleman Foundation Comprehensive Clinic for Gastrointestinal Cancers at Rush. "This also could potentially be a viable treatment option for patients who have inoperable tumors located in their esophagus."

The investigational drug, called OncoGel, is made of two major components, the ReGel drug delivery system, which is a gel made up of ingredients used in biodegradable stitches, and paxlitaxel, a well established, FDA-approved anti-cancer chemotherapy agent. Patients receive a one-time injection of OncoGel during an [endoscopy](#).

"In pilot studies, OncoGel has been shown to continuously release paclitaxel, which is the chemotherapy agent, in concentrated doses at a higher magnitude than in just delivering it through the blood for up to six weeks," said Mobarhan.

Esophageal cancer can develop when [stomach acid](#) backs up into the lower esophagus, in some cases damaging cells in the inner layer of the esophagus. This abnormal cellular change is known as Barrett's esophagus. A person could ultimately develop cancer of the esophagus as a result of developing Barrett's.

"Because the symptoms do not seem unusual, the disease can go unnoticed and ignored for long periods of time," said Mobarhan. "A chronic cough, sore throat, indigestion and acid reflux are some of the symptoms that can mask the disease. The lesions that form into cancerous tumors can cause the opening of the esophagus to narrow to nearly half its usual width and make it difficult to swallow."

Data indicates that only 16,000 new cases of esophageal cancer are reported in the U.S. in 2008 and more than 14,000 people - almost 90 percent - died from the disease.

In an earlier phase of the study of OncoGel in patients with late stage inoperable esophageal cancer, 70 percent of patients had a reduction in tumor volume when OncoGel was used in combination with radiotherapy. In addition, after treatment, biopsy samples did not contain tumor cells in almost 40 percent of patients.

Source: Rush University Medical Center ([news](#) : [web](#))

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