

Radiofrequency ablation is effective treatment for dysplasia in Barrett's esophagus

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Interim results from a nationwide clinical trial led by a University of North Carolina at Chapel Hill researcher suggest that radiofrequency ablation is an effective treatment for dysplasia in people with Barrett's esophagus, a condition that can lead to deadly gastrointestinal cancer.

“The interim results show there is a substantial difference between treatment with radiofrequency ablation and a placebo or ‘sham’ treatment,” said Dr. Nicholas Shaheen, principal investigator of the study and director of UNC's Center for Esophageal Diseases and Swallowing. “It's a strongly positive finding.”

Shaheen, who is also an associate professor of medicine and epidemiology in UNC's Schools of Medicine and Public Health, presented the results Monday, May 19 at the annual Digestive Disease Week meeting in San Diego.

Barrett's esophagus is a condition in which repeated acid reflux causes the cells that normally line the esophagus to be replaced by a different type of cell, similar to those normally found in the intestines. This process is called intestinal metaplasia. By itself Barrett's is not a life-threatening problem, but a small percentage of people with Barrett's will develop esophageal adenocarcinoma, an especially deadly form of cancer.

Radiofrequency ablation, a non-invasive technique that uses thermal energy, or heat, to destroy cells, is very effective at destroying abnormal cells in the esophagus. The new UNC-led study is the first randomized trial to evaluate radiofrequency ablation for treating dysplasia, a more advanced stage of Barrett's esophagus in which the abnormal cells acquire precancerous traits.

The radiofrequency ablation system used in the study uses thermal energy provided by a set of electromagnetic coils on the surface of a balloon, Shaheen said. "The balloon is placed in the area of the esophagus where the offending cells are and the balloon is inflated. Energy is then passed through the electromagnetic coils and, because we know how far apart the coils are spaced and how much energy is being put through them, we get a very reliable depth of burn, such that you can kill the abnormal cells on the inner surface without damaging the whole organ."

In the study to date, 127 people were randomized to receive either radiofrequency ablation or a simulated, "sham" version of the procedure at one of 19 participating medical centers. Among those who received radiofrequency ablation, 85 percent were free of dysplasia 12 months after treatment. Seventy-four percent had no evidence of Barrett's at all in their biopsies. In comparison, none that received sham treatment were free of Barrett's.

Source: University of North Carolina at Chapel Hill

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