PROCEDURE INFORMATION- RFA

Radiofrequency Ablation (RFA) is an FDA-approved endoscopic technique in which diseased tissue is exposed to heat energy and destroyed. Specialists at the Comprehensive Digestive Institute of Nevada offer RFA to treat Barrett's esophagus.

RFA was first used to treat Barrett's esophagus in 2005. Since then, more than 50 clinical studies have demonstrated the safety and efficacy of RFA for complete removal of Barrett's esophagus, as well as reducing progression of dysplasia to esophageal cancer. These studies have demonstrated successful removal of dysplasia in more than 90% of patients undergoing therapy.

How Does Radiofrequency Ablation Work?

One of the most common radiofrequency ablation devices, used to treat 3 cm of Barrett's mucosa in circumferential manner. This 360 catheter is placed over a wire, next to the endoscope

RFA for Barrett's esophagus is performed on an outpatient basis by a gastroenterologist. Under the care of an anesthesiologist, the patient will receive either deep sedation or general anesthesia.

An electrode mounted on a balloon catheter or a thin, flexible tube (endoscope) is used to deliver heat energy directly to the diseased lining of the esophagus. The gastroenterologist will choose one of three electrodes for the procedure. The predominant factor in which electrode is used will be the length/amount of Barrett's esophagus to treat. The energy delivered by the electrode results in high temperature heating of the Barrett's lining. This process typically takes 25 to 35 minutes and leads to ablation of the tissue.

This tissue sloughs off over 48 to72 hours following the procedure. Over a period of six to eight weeks, this tissue is replaced by normal (squamous) lining.

Another common radiofrequency ablation device, the 90 catheter is placed on the endoscope and used to remove patches of Barrett's mucosa

What Preparation is Required Before Radiofrequency Ablation?

Patients with high-grade dysplasia often undergo an endoscopic ultrasound exam to ensure there is no deeper tissue involvement before undergoing RFA.

The patient will be asked not to eat or drink anything after midnight the night before the procedure. If the patient takes daily medication in the form of a pill, he/she may take it with sips of water the morning of the RFA.

What is the Recovery Time and Follow-up?

Patients are discharged from the Mass General endoscopy unit with prescriptions for oral pain medications and an oral numbing solution they may use for five to seven days.

A modified diet is recommended for the first three days after the procedure to allow time for healing. Patients may return to work the day after the procedure.

All patients with Barrett’s esophagus will also be treated with high-dose antacids (typically in the proton pump inhibitor family) indefinitely. A low-acid environment helps the body replace the removed tissue with normal tissue (squamous mucosa). Patients will remain in a surveillance program indefinitely to ensure that the Barrett's mucosa, or diseased tissue, does not recur.

For most patients, one to three RFA treatment sessions are required to remove all of the Barrett’s mucosa.

Patients who are treated with RFA return for a follow-up endoscopy in two to three months to ensure they are healing properly and to determine if additional treatment is required. Surveillance endoscopy is performed on a regular basis after all of the Barrett’s esophagus has been

adequately treated, starting every six months, with increasing intervals with each normal follow-up examination.

How Safe is the Procedure?

RFA is a safe and well-tolerated procedure. However, about 20% of patients may have chest pain following the procedure.

About 5% of patients may develop narrowing of the esophagus (known as a stricture) as a result of RFA and may require one or more procedures to stretch the esophagus (known as dilations) to treat this. Strictures are more common in patients who have had previously undergone endoscopic mucosal resection (EMR).

Major complications are very uncommon (occur in less than 1% of patients), but may include bleeding or perforation of the esophagus.