Endoluminal Radiofrequency Cauterization System

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Technology description

Summary

The invention is a device for occluding the lumen of a hollow organ, vessel or aneurysm by delivering radio frequency energy to its inner wall. The apparatus uses specialized electrodes that contact the walls of the organ to substantially conform to the inner surface. RF energy is then applied to the electrode at any of a broad range of desired frequencies for selected times at power levels of from 20 to 200 watts. Delivery of RF energy may be regulated by monitoring temperature, tissue impedance or other parameters at or near the site of the electrode. A temperature sensor located near the electrode allows microprocessor-based control of the power delivered to the electrode site as a function of tissue temperature.

Application area

The device has applications in therapeutic thrombosis of an aneurysm, stopping blood flow to a tumor or bleeding vessel, or reducing stricture or stenosis in, for example, a bronchus, esophagus, intestine segment or a blood vessel. The invention also may be useful in reducing stenosis in a coronary artery or to reduce a restenotic lesion from intimal hyperplasia that may occur after angioplasty.

Institution

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