



TECHNOLOGY AVAILABLE FOR LICENSING

Wide Aperture, Catheter-Based Cardiac Ablation Antenna

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Invention Details:

The invention uses microwave energy, applied by means of a deployable spiral wire antenna, inserted through blood vessels and positioned inside the heart using a catheter for the purpose of treating cardiac arrhythmias. The spiral antenna, once deployed within the heart is surrounded by a balloon, inflated with a non-conductive and physiologically compatible fluid. Microwave power is then delivered through a coaxial line within the catheter. The frequency of microwave power is selected to produce a deep and wide hemispherical lesion to ablate diseased cardiac tissue. After the delivery of microwave power and the ablation of tissue, the balloon is deflated, the spiral is withdrawn, and the applicator and catheter are removed from the body.

Benefits of the Invention:

The technology is used to treat various forms of cardiac arrhythmias with microwave energy. The current treatment uses radio frequency to deliver the electromagnetic power to the inner surface of the heart, but the low frequency field falls off rapidly and focusing the power in the abnormal cardiac muscle is not possible. The technology of using microwave energy with a newly designed antenna is superior to using radio frequency with current catheter ablation technology.

Advantages:

Increased deposition of power depth in tissue
Maximum focus on area of diseased cardiac tissue
Maximum control of temperature on cardiac tissue
Minimal charring of cardiac tissue

Uses:

Arrhythmias
Cardiac Ablation

The Bottom Line:

The invention is a medical device for cardiac ablation, using microwave energy.

For More Information:

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