Gold standards of success defined for AF ablation

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The 2012 expert consensus statement on catheter and surgical ablation of atrial fibrillation was developed by the Heart Rhythm Society (HRS), the European Heart Rhythm Association (EHRA), a registered branch of the European Society of Cardiology (ESC), and the European Cardiac Arrhythmia Society (ECAS) and published in their respective journals: *Heart Rhythm*, *EP Europace* (1) and the *Journal of Interventional Cardiovascular Electrophysiology* (*JICE*).

Since the previous consensus document was published in 2007 catheter and surgical ablation of AF have become standard treatments and more randomised trials of ablation versus optimal drug therapy for AF have been conducted. "Significantly more data exist on techniques, success rates and complications of these new interventions, making this a more valid document compared to 2007," said Professor Karl Heinz Kuck (Germany) president-elect of EHRA and co-chair of the task force that developed the document.

He added: "Data from randomised trials clearly indicate that catheter ablation is superior to any drug treatment for recurrences of atrial fibrillation and quality of life. But the long term outcome is not as good as we thought in 2007."

Newly analysed data on the long term outcome after successful ablation of longstanding persistent atrial fibrillation, shows that just 40-50% of patients remain free of recurrent AF after 5 years.

The increase volume of data enabled the authors to calculate minimum acceptable success rates for the different types of AF for the first time. Success was defined as freedom from AF, atrial flutter (AFL) and atrial tachycardia (AT) and no antiarrhythmic drug therapy. At 12 months following the ablation procedure, the minimum acceptable success rates are 50% for paroxysmal AF, 40% for persistent AF and 30% for longstanding persistent AF. Professor Kuck said: "If patients see that their doctor or institute is not achieving these minimum success rates, they can ask what the problem is."

Also for the first time, the authors state that the maximum overall complication rate should be in the region of 4.5%. "For an invasive procedure you want to know how successful it is but you also want to know how risky is it," said Professor Kuck. "In this paper we clearly define the maximum overall complication rate so that patients can see if an institute is performing adequately."

Standards are clearly set out for the design of clinical trials. The minimum set of data that should be published is outlined, along with the endpoints and definitions that should be used. Professor Kuck said: "This should increase standardisation of trials and enable researchers, patients and organisation to compare success and complication rates more easily."

Another new feature in the 2012 document is a recommendation to perform catheter ablation in patients with paroxysmal AF and no or minimal underlying heart disease as a first line treatment. Previous recommendations said these patients should first receive an anti-arrhythmic drug and only proceed to catheter ablation if the drug failed. Professor Kuck said: "Patients with paroxysmal AF can now receive the primary treatment option straightaway, without any delay."

He concluded: "This comprehensive state of the art review of the field of

catheter and surgical ablation of atrial fibrillation sets out standards for success rates, complication rates and clinical trial design. This will help patients, doctors, researchers and organisations to see which doctors and institutions are up to scratch and where improvements are needed."

"Forty-five experts from around the world representing seven different organizations have come together to develop a consensus for successful catheter and surgical ablation of atrial fibrillation. It is our hope that this guidance will help to ensure that patients seeking treatment will receive high quality care regardless of where they live and also bring us one step closer to ending pain and suffering due to heart rhythm disorders," noted Anne M. Gillis, MD, FHRS, president of Heart Rhythm Society.

More information: 1 2012 HRS/EHRA/ECAS Expert Consensus Statement on Catheter and Surgical Ablation of Atrial Fibrillation: Recommendations for Patient Selection, Procedural Techniques, Patient Management and Follow-up, Definitions, Endpoints, and Research Trial Design. Europace. 2012 Apr;14(4):528-606. Epub 2012 Mar 1.

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