

8 QUOTATIONS

1 Ablation of Accessory Pathways

„Curative treatment for patients with tachycardia related to an AP initially was by surgery and catheter ablation (56-145). The first fulguration of an AP was performed by Weber and Schmitz in **1983** (60).”

By:

Michel Haissaguerre, Bruno Fischer, Frank Marcus, Jacques Clémenty

In: CARDIAC ARRHYTHMIAS William J Mandel, Third Edition, page 949

Note: This was the first **HD mapping guided** catheter ablation of an arrhythmogenic substrate.

2 Experimental and Clinical Results

“Since the **mid-80s** both the Charlotte group ...as well as other groups such as Dr. G.M. Vincent in Salt Lake City, UT, USA and Dr. H.P. Weber in Munich, and Dr. R. Moosdorf Germany have investigated the use of laser-light for the modification of cardiac cellular depolarization and reshaping the excitation wave-front (12,13,41,50)”.

By:

Robert Splinter. Laser Catheter Ablation of Cardiac Arrhythmias: Experimental and Basic Research and Clinical Results 16.

In LASERS IN CARDIOVASCULAT INTEVENTIONS On Topaz (Ed), Springer 2015, page 213

3 Preface report on cardiovascular laser application by using the open-irrigated ELMA catheter RytmoLas® as an intriguing alternative for catheter ablation of arrhythmias:

“Electrophysiological studies in infants and children performed in the Department of Pediatric Cardiology, University of Göttingen, by using small sized #2F to #6F catheters with narrow interelectrode distances of 2.0 mm disclosed electrical potentials, suggesting specific signals of accessory pathways or of ectopic arrhythmia foci. Such specific potentials were not present in the electrograms when interelectrode distances were ≥ 4.0 mm. DC shocks aimed at endocardial sites of specific potentials abolished the potentials and cured the patients from the arrhythmia. However, due to the severe barotrauma of DC shocks alternative energy sources were tested. Eventually the 1064nm continuous wave (cw) Nd:YAG laser was found the optimal power source for intracardiac transcatheter energy application.

Based on the authors' experience with high resolution mapping by using ring-electrode catheters with narrow interelectrode distances pin-electrodes with interelectrode distances Of 2.0 mm were mounted at the tip of a novel open-irrigated electrode laser mapping and ablation (ELMA) catheter. Endocardial exploration with the ELMA catheter during continuous bipolar electrical potential recordings allowed for localization of the earliest endocardial activation, and, as a new observation a gradual abatement of potential amplitudes was conspicuous in the LEGs (local electrograms) during laser application. This was practicable because laser light does not interfere with electrophysiologic monitoring principles and allows for an immediate real-time verification of initial laser effects.”

By:

Helmut Weber, Lothar Schmitz, A Heinze, L Ruprecht, and M Sagerer-Gerhardt. The Development of a Laser Catheter with Improved Mapping Resolution and Online Monitoring of Lesion Formation during Arrhythmia Ablation.

In: LASER ABLATION; Advances in Research and Applications, C Bellucci (Ed). Nova Science Publishers, Inc. New York
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