Paroxysmal AF ablation with Hybrid very HPSD Experience with QDOT®

Frederic A. SEBAG

Rythmopole.paris

Rhythm Congress Marseille May 19th

Conflict of Interest

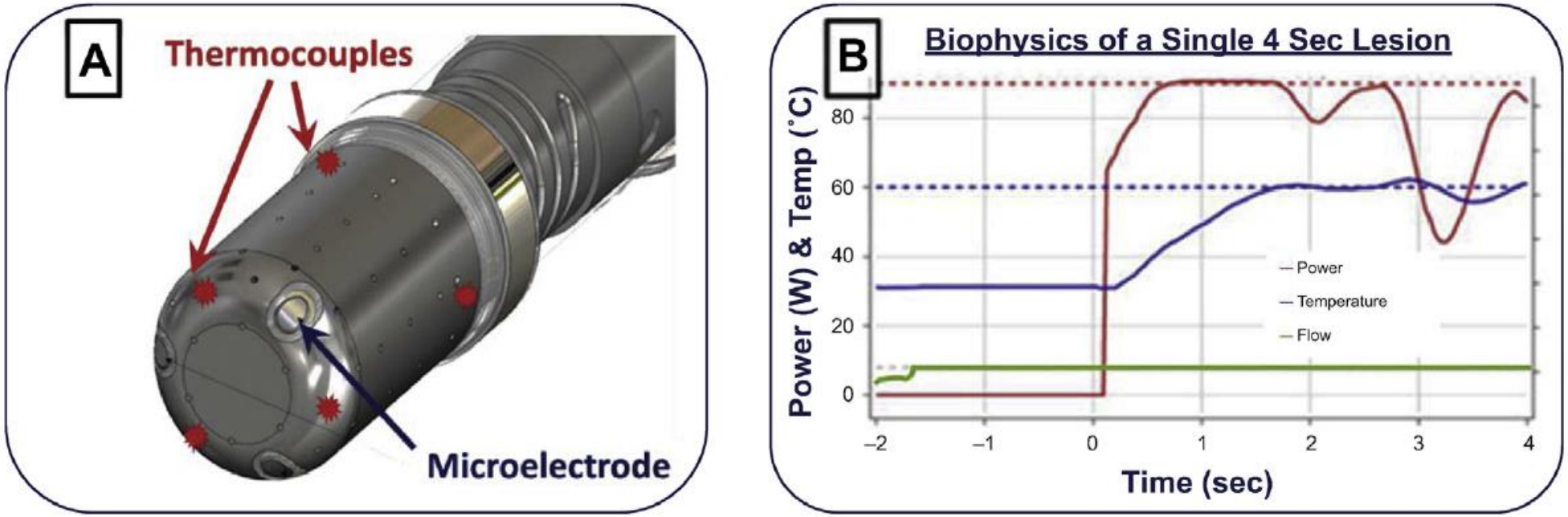
- None

QDOT presention

- QDOT Micro® is a novel contact force-sensing catheter optimized for temperature-controlled radiofrequency ablation with microelectrodes and 6 thermocouples for real-time temperature monitoring.
- QDOT Micro® offers different options regarding radiofrequency (RF) delivery.
  - Q-MODE: is a High-Power-Short-Duration (HPSD) temperature control RF delivery mode up to 50 W
  - Q-MODE+: is a very High-Power-Short-Duration (vHPSD) temperature control RF delivery mode at 90 W
  - Hybrid Q-MODE/Q-MODE+: is a mix of the two methods cited above

QDOT Micro ® catheter

FIGURE 1 The vHPSD Catheter

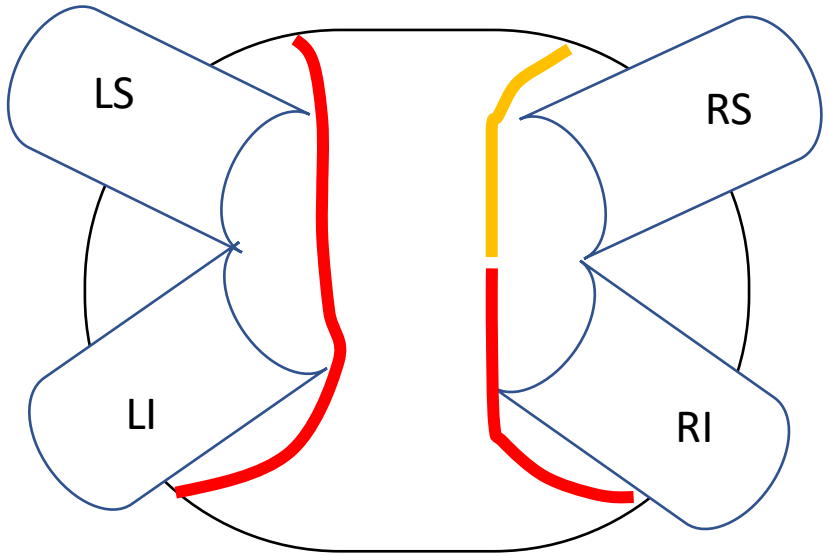


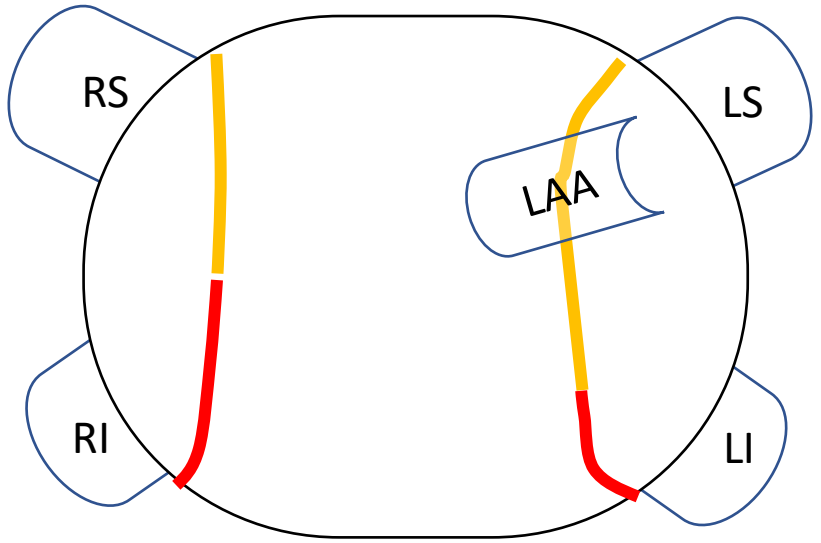
(A) The very high power-short duration (vHPSD) catheter tip is shown highlighting the microelectrodes and 6 thermocouples. **(B)** The biophysical parameters of an example ablation lesion is shown. This includes a 2-s pre-cooling phase, followed by a 4-s vHPSD ablation lesion. Note the power modulation that is particularly striking in the last 1.5 s of energy delivery to maintain the target temperature of 60°C.

Case presentation

- Mr OL… 59 yo
- Drug refractory AF
  - Bisoprolol + Flecainide
- CHADSVASC Score: 0
- EHRA: 3
- AF history: 9 months
- LVEF: 65%
- LAVI: 30mL/m^2

Hybrid RF delivery protocol (PA -AP view)





50W

90W

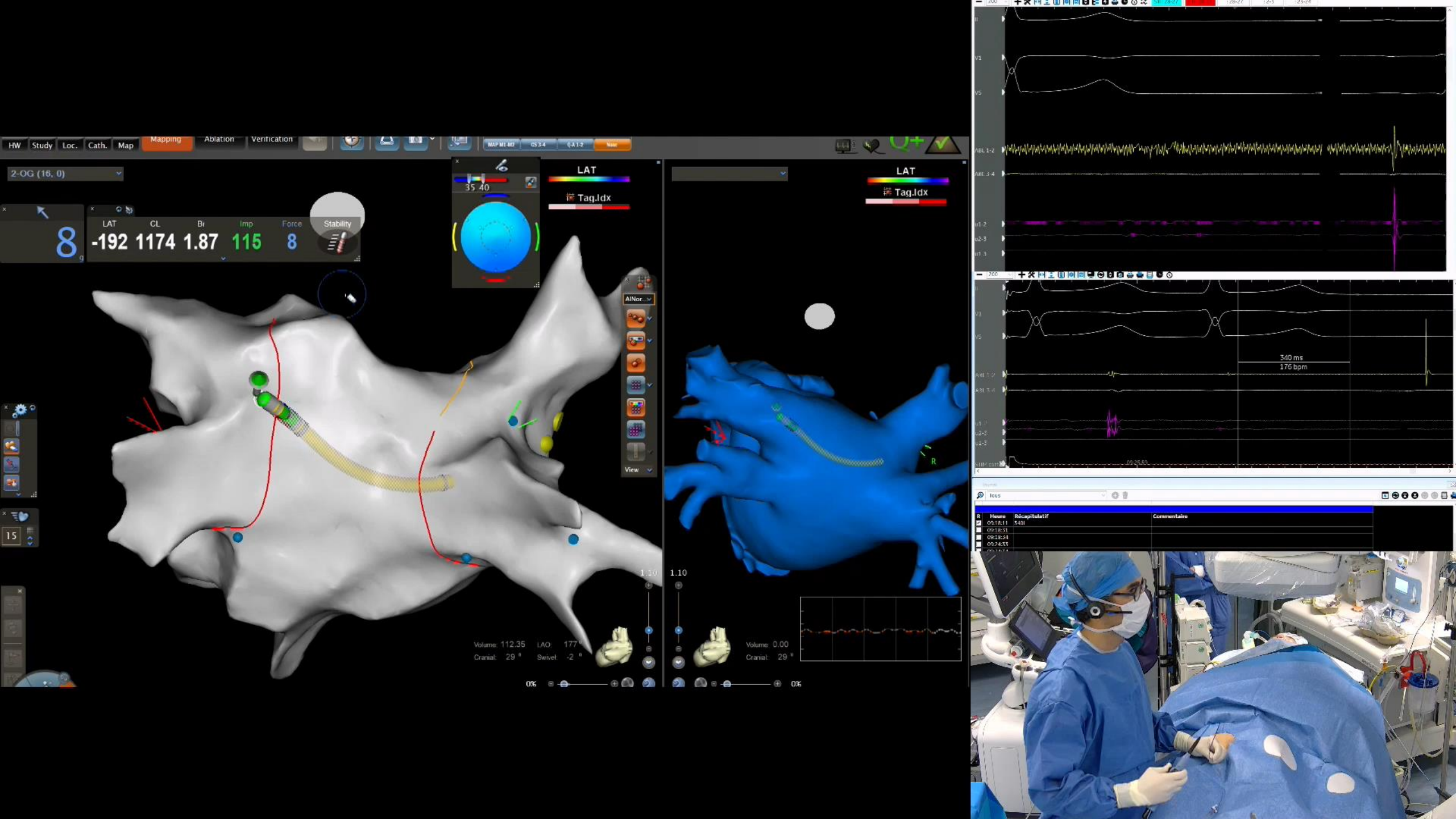
Hybrid approach used vHPSD except in the most unstable and thickest area

- Left anterior carina and LSPV ridge
- Anterior, posterior wall and roof of RSPV

where HPSD is used

Procedure

- GA
  - Apnea during 4-5 min for vHPSD lesions
- Single femoral access
- Transseptal puncture
- Oesophageal T° probe (39°C)
- LA FAM with
  - Phrenic Nerve annotation
  - Design lines for 50W and 90W
- PVI check with entrance & exit block validation


HW
Study
Loc.
Cath.
Map
Mapping
Ablation
Verification
2-OG (16, 0)
LAT
CL
BI
Imp
Force
Stability
-192
1174
1.87
115
8
LAT
Tag.Idx
LAT
Tag.Idx
340 ms
176 bpm
Volume: 112.35
LAO: 177
Cranial: 29
Swivel: -2
Volume: 0.00
Cranial: 29
Heure
Récapitulatif
Commentaire

Conclusion:

- Stability is key
  - GA
  - Apnea or Jet Ventilation
  - High rate (400ms CL) atrial pacing
  - Steerable sheath (Vizigo®)
  - No respiration gating
- Lesion quality & durability
  - More data needed (QDOT Fast, …)
  - Amenable for linear lesions