Fibrillation Atriale sur ECG

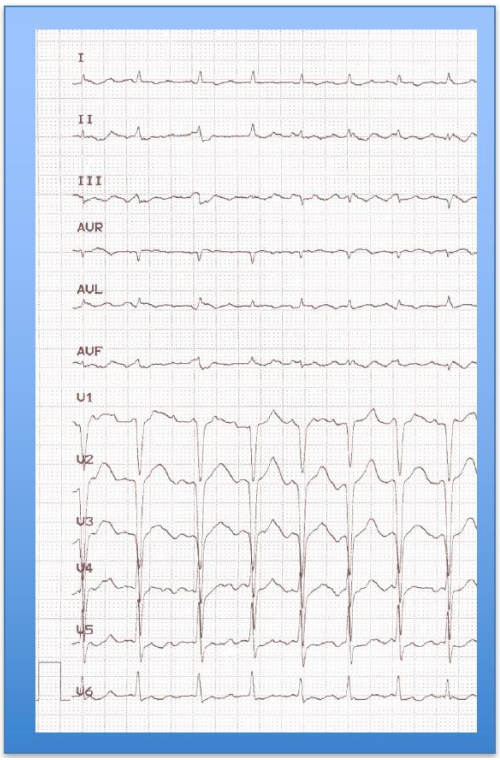
Tachyarythmie supraventriculaire

Activité atriale désordonnée

Perte des ondes P

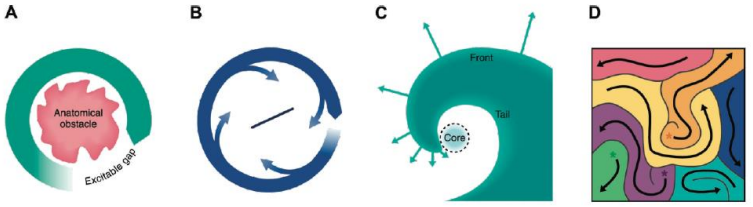
Réponse ventriculaire irrégulière

Parfois rapide

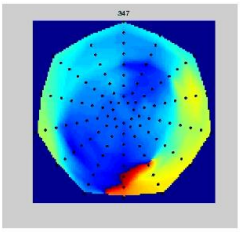


Atrial Fibrillation : Mechanisms

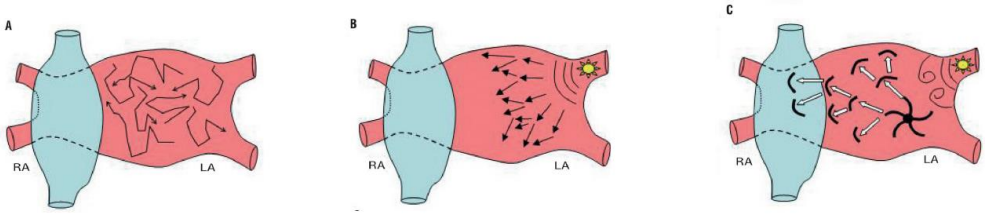
Types of Reentry



Schotten et al, Physiol Rev 2011



Umapathy et al, Circ Arr Electrophysiol 2010

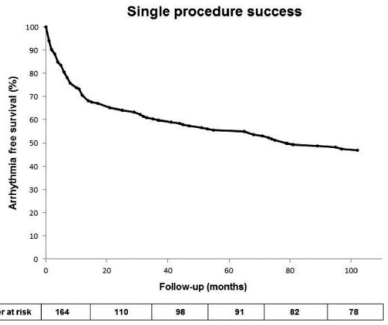


Nattel S et al, Nature Medicine 2011

HUG: Follow-up 7-11 yrs after Catheter Ablation of AF

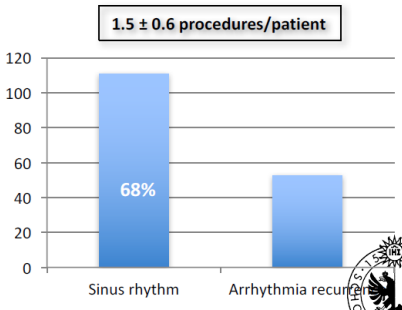
Mean FU 9.1 yrs (range 7.7 to 10.5 yrs), 1,492 patient years (PY)

Baseline Characteristics	Patients with Follow-Up (Study Population) (n = 164)	Patients Loss of Follow-Up (n = 100)	P Value
Mean follow-up (years)	9.1 (7.7–10.5)	None	
Age >55 years (%)	97 (59)	47 (47)	0.40
Male (%)	133 (81)	79 (79)	0.92
Paroxysmal AF (%)	118 (72)	68 (68)	0.85
Stroke before initial ablation (%)	13 (8)	6 (6)	0.73
CHA2DS2-VASc <2 (%)	104 (63)	59 (59)	0.80
Structural heart disease (%)	44 (27)	17 (17)	0.17



Predictors of recurrence

Baseline Characteristics	OR	95% CI	P Value
Dyslipidemia (normal vs abnormal)	2.95	[1.49; 5.94]	0.003
CHA2DS2-VASc (<2 vs ≥2)	3.22	[1.63; 6.39]	0.001
Amiodarone (no vs yes)	5.64	[2.34; 13.6]	<0.001



Hôpitaux Universitaires Genève

Van Tran…Shah D et al, *PACE 2015; 38:499–506*

2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS

Catheter or surgical ablation should be considered in patients with symptomatic persistent or long-standing persistent AF refractory to AAD therapy to improve symptoms, considering patient choice, benefit and risk, supported by an AF Heart Team.	IIa	C

- Catheter ablation is effective in restoring and maintaining sinus rhythm in patients with symptomatic paroxysmal, persistent, and *probably* long-standing persistent AF, .. as second-line treatment after failure of or intolerance to antiarrhythmic drug therapy.
- In such patients, catheter ablation is more effective than antiarrhythmic drug therapy.
- Available data point to lower recurrence rates after catheter ablation compared to antiarrhythmic drug therapy with or without cardioversion
- No current indication for catheter ablation to prevent cardio- vascular outcomes (or desired withdrawal of anticoagulation), or to reduce hospitalization.

2017 HRS/EHRA/ECAS/APHRS/SOLAECE Expert Consensus Statement on Catheter and Surgical Ablation of Atrial Fibrillation

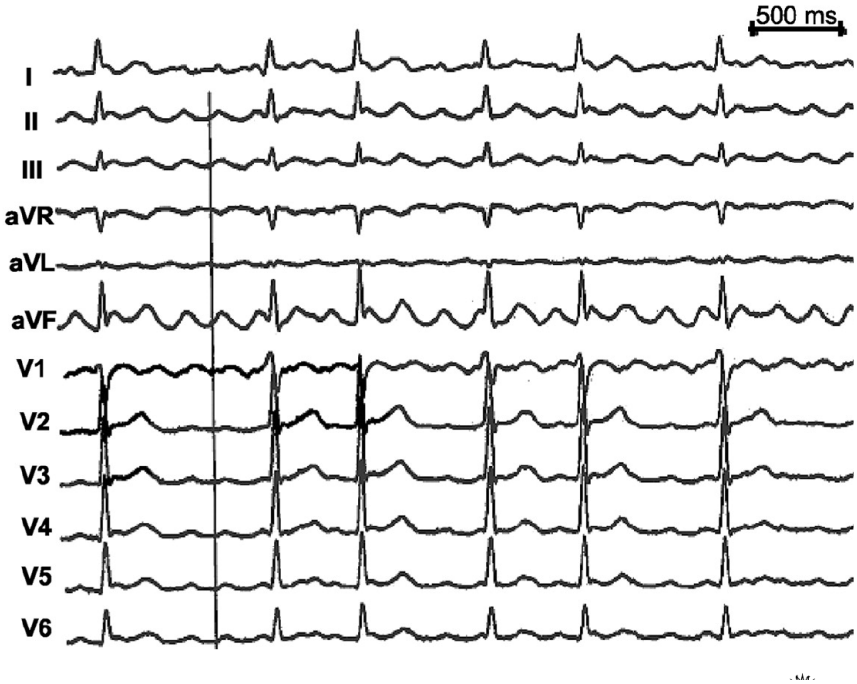
Table 2A Indications for catheter ablation of atrial fibrillation

	Recommendation	Class	LOE	References
Symptomatic AF refractory or intolerant to at least one Class 1 or 3 antiarrhythmic medication	Paroxysmal: Catheter ablation is recommended.	1	A	261,262,462, 489,503,655, 673,684,709, 1027-1029
	Persistent: Catheter ablation is reasonable.	2A	B-NR	245,262,515, 527,733, 1015,1025-1030
	Long-standing persistent: Catheter ablation may be considered.	2B	C-LD	245,262, 515,527, 733,1015, 1025-1030
Symptomatic AF prior to initiation of antiarrhythmic therapy with a Class 1 or 3 antiarrhythmic medication	Paroxysmal: Catheter ablation is reasonable.	2A	B-R	370,372, 377-383
	Persistent: Catheter ablation is reasonable.	2A	C-EO	
	Long-standing persistent: Catheter ablation may be considered.	2B	C-EO	
Asymptomatic AF**	Paroxysmal: Catheter ablation may be considered in select patients.**	2B	C-EO	416,418
	Persistent: Catheter ablation may be considered in select patients.	2B	C-EO	417

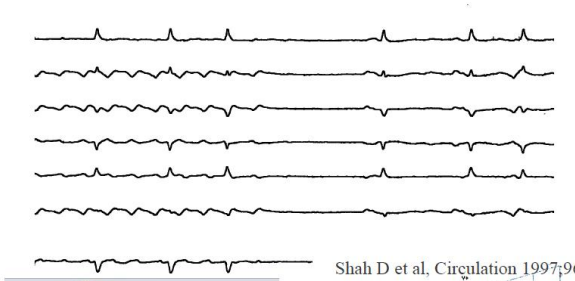
**A decision to perform AF ablation in an asymptomatic patient requires additional discussion with the patient because the potential benefits of the procedure for the patient without symptoms are uncertain.

Clockwise typical flutter

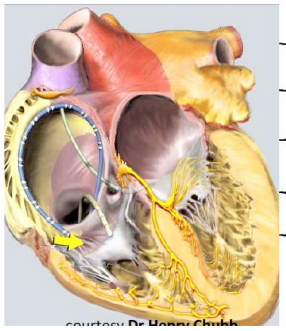
- Often mistaken for atypical flutter
- Notched –ve in V1 and
- +ve in inferior leads
- Much less common than CCW flutter (10% vs 90%)

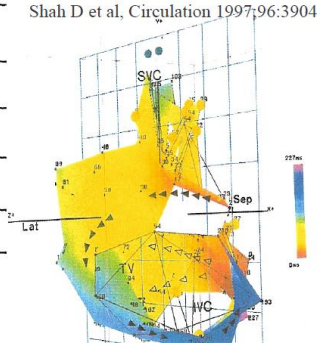


Catheter ablation of typical flutter : *Jan 2002 - Dec 2003, 53 patients*



Shah D et al, Circulation 1997;96:3904





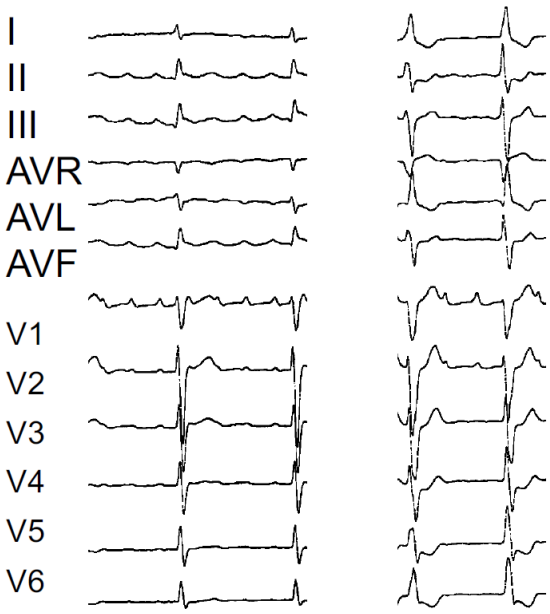
- Procedure time: 72 ± 34 min
- Fluroscopy: 19 ± 14 min
- RF time: 13 ± 9 min
- CCW isthmus dependent flutter, n=45
  CW isthmus dependent flutter, n=8
  Cycle length: 254 ± 42 ms
  No procedural adverse effects

Follow up: 12 ± 8 months (1-25)

- 1 patient had a recurrence (2%); successfully reablated

Left Atrial Flutter

- ECG features
  - *completely or dominantly positive deflection in V1*
  - *lower voltage deflections in the standard limb leads with a positivity in V1*
  - *less commonly, negative deflections in the inferior leads suggestive of typical AF: (pseudo-typical) flutter*



ELSEVIER

Canadian Journal of Cardiology 27 (2011) 60–66

Society Guidelines

Canadian Cardiovascular Society Atrial Fibrillation Guidelines 2010: Catheter Ablation for Atrial Fibrillation/Atrial Flutter

Atul Verma, MD, FRCPC,[a] Laurent Macle, MD, FRCPC,[b] Jafna Cox, MD, FRCPC,[c] Allan C. Skanes, MD, FRCPC,[d] and the CCS Atrial Fibrillation Guidelines Committee[e]

Catheter Ablation of Atrial Flutter

..... Given the simplicity of this procedure (in contrast to AF ablation) with its accompanying low risk and given that atrial flutter is very hard to control pharmacologically, flutter ablation is recommended as an alternative first-line therapy to drugs. This has been supported by a number of clinical trials comparing atrial flutter ablation to drug therapy.[15,38] However, after elimination of AFL, over the next 5 years, approximately 60%-65% of patients will develop AF as a stand-alone problem.[39]

RECOMMENDATION

We recommend curative catheter ablation for symptomatic patients with typical atrial flutter as first line therapy or as a reasonable alternative to pharmacologic rhythm or rate control therapy (Strong Recommendation, Moderate-Quality Evidence).

Values and preferences. This recommendation recognizes the high efficacy, low complication rate of catheter ablation and low efficacy of pharmacologic therapy, whether rate or rhythm control.