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Common clinical dilemmas in AF

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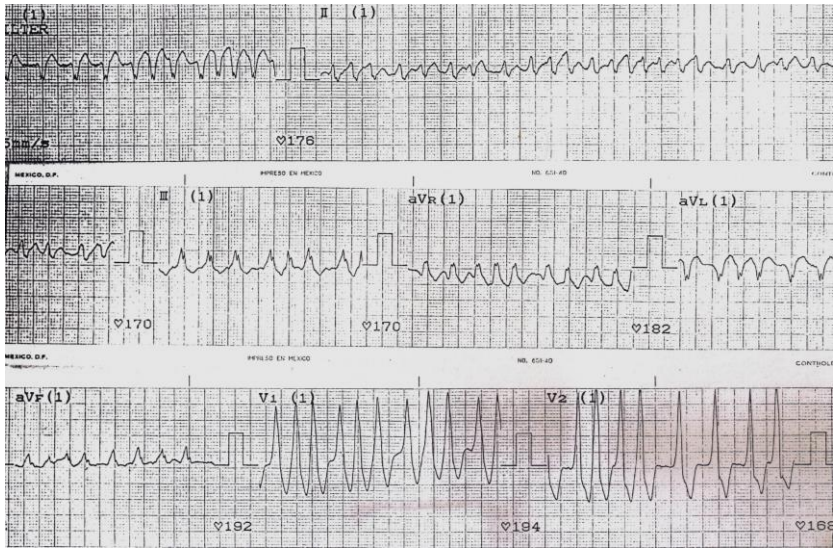
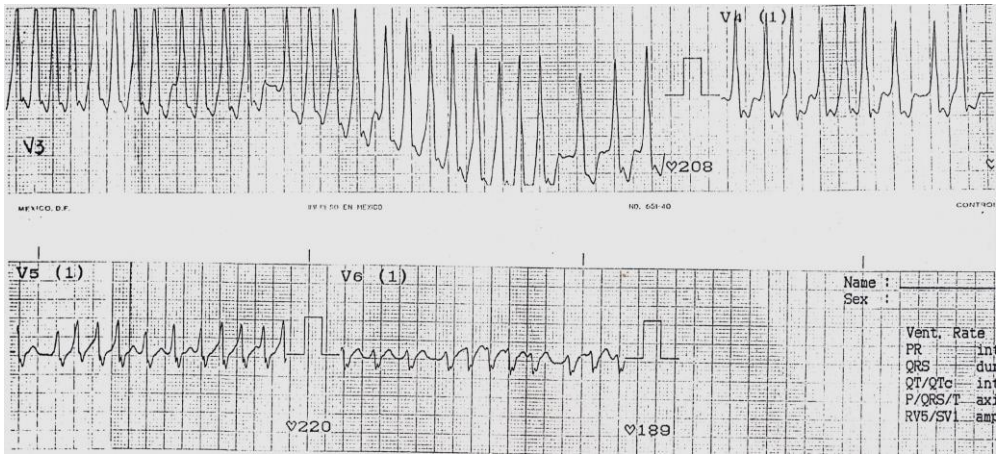
ACC Latin America Conference 2016

Case presentation

- Male, 40 years old, Apparently no risk factors for CV disease
- History of palpitations since age 20, very sporadic and very short in duration.
- Presents to the ER with tachycardia, diaphoresis, and chest pain.
- Presyncope when standing to get on his way to the ER.
- At arrival patient is diaphoretic, BP is 70/40 and HR is 220bpm

Case presentation



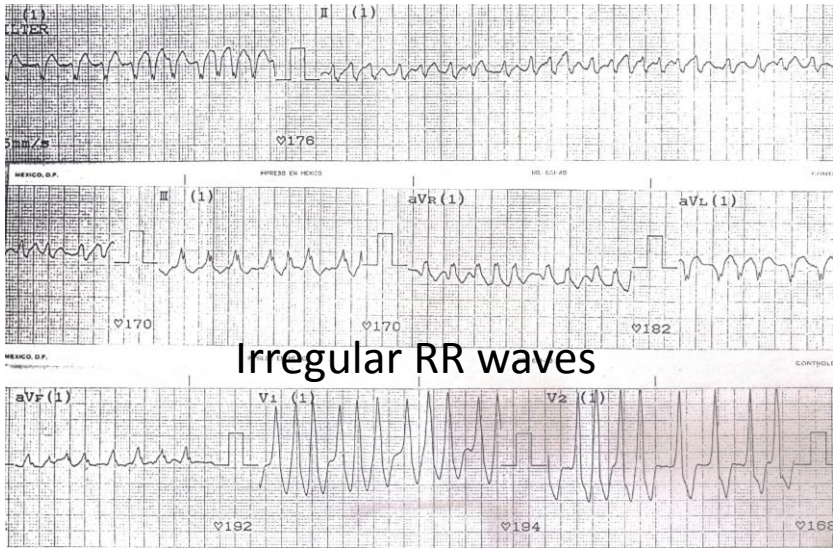


Case presentation

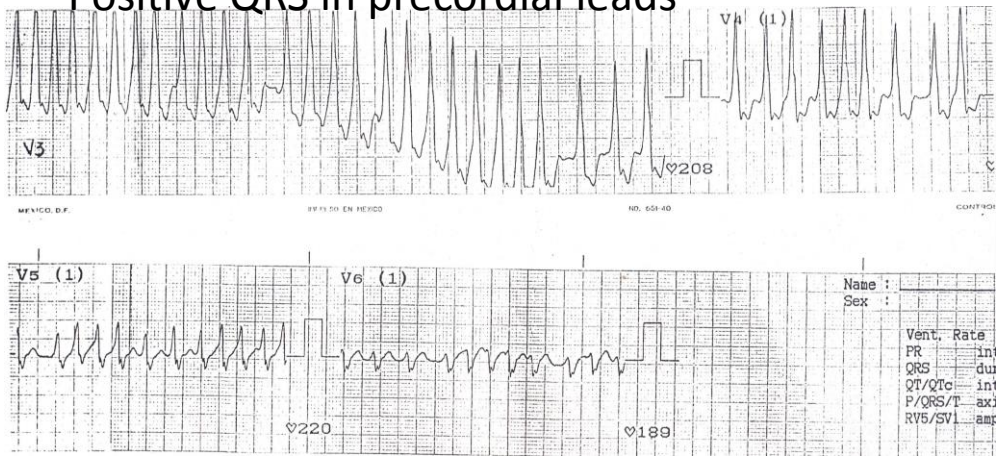
- Dx:
  a) Ventricular Flutter
  b) Polymorphic VT
  c) Atrial fibrillation with RBBB
  d) Preexcited AF.

Case presentation

Positive QRS in precordial leads



Irregular RR waves



Wide QRS wiht different degrees of preexcitation

Case presentation

Different degrees of preexitation

irregular

Atrial Fibrillation and WPW

- Dilemma?
- To your opinion what is the main point in the ER initial evaluation in patients with acute AF.

a) Stablish the risk for thrombosis.

b) Stablish the hemodynamic stability.

c) Stablish the etiology of AF

d) Rule out secondary causes like ischemia or pulmonary embolism.

Dilemmas in AF

- In this particular case what would be the best approach.
  a) Rate Control with BB/calcium channel blockers
  b) Rhythm/Rate control with amiodarone
  c) Adenosin IV
  d) Sedation and Cardioversion

Dilemmas in AF

- Risk for sudden death or VF.
  - Risk of 0.1% in asimptomatic patients
  - 1% in patients with previous episodes of OSVT.
  - 5.6% in patients with AF.
  - Might be the firs manifestation of the disease.
  - Short R-R intervals (less than 250ms, Multiple accesory pathways)

Dilemmas in AF

- What is the best approach on the secondary evaluation of patients with AF
  - Risk of thrombosis, rate control and referral for a possible rhythm control strategy
  - Risk of Thrombosis, and pharmacological cardioversion and if failed, rate control.
  - Risk of thrombosis, and electric cardioversion.

Case presentation

- Dilemma? Future treatment

a) Antiarrhythmic treatment with IC AA

b) Amiodarone IV and then orally

c) Refer for ablation of accessory pathway as soon as possible

d) Refer for AF ablation since no orthodromic tachycardia has been documented.

Dilemmas in AF

- Ablation of AP would eliminate AF?

Recurrence rate after Ablation of AP

Previous AF 7% vs 0% with no previous AF

Table 2 Baseline characteristics of patients with and without AF before RF ablation

Males, %	77	73	ns
Age, years	53 ± 13	42 ± 15	0·03
Pre-excitation during SR, %	87	73	0·04
Increased atrial vulnerability, %	42	18	0·001
Structural heart disease, %	17	13	ns
Duration of symptoms, years	17	16	ns
RR interval during orthodromic tachycardia, ms	321 (n=45)	315 (n=117)	ns

ns=not significant; AF=atrial fibrillation; RF=radiofrequency; SR=sinus rhythm.

6 pts with AF as the only arrhythmia and no OSVT

non recurred after ablation of AP??

Table 3 Baseline characteristics of patients with AF before RF ablation and who did or did not develop AF after ablation

	Pts with AF after RF n=13	Pts without AF after RF n=41	*P* value
Pre-excitation, %	92	85	ns
Atrial vulnerability, %	77	29	0·0023
Duration of symptoms, years	20 ± 17	15 ± 11	ns
Attacks per month	13 ± 21	1 ± 3·3	0·0013
RR interval during AF, ms	221 ± 51 (n=9)	238 ± 68 (n=35)	ns

AF=atrial fibrillation; pts=patients; RF ablation=radiofrequency catheter ablation; ns=not significant.

Oddsson H. et al Europace 2002

Dilemmas in AF

Recurrence rate after AP ablation
Group 1 antegrade conduction only
Group 2 AVRSVT

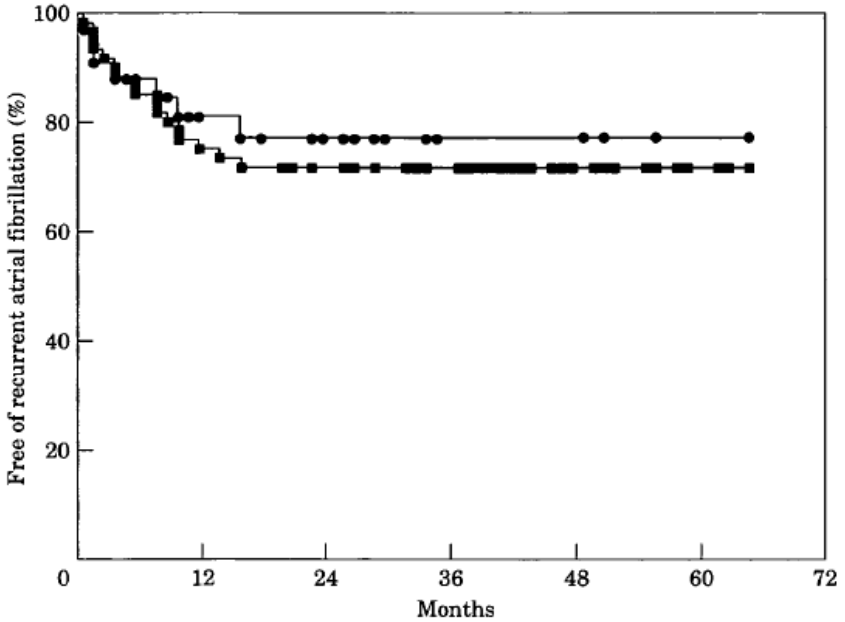


Figure 1 Kaplan–Meier analysis of recurrent atrial fibrillation in Groups I (●) and II (■) with prior atrial fibrillation after successful ablation. $P=0{\cdot}62$.

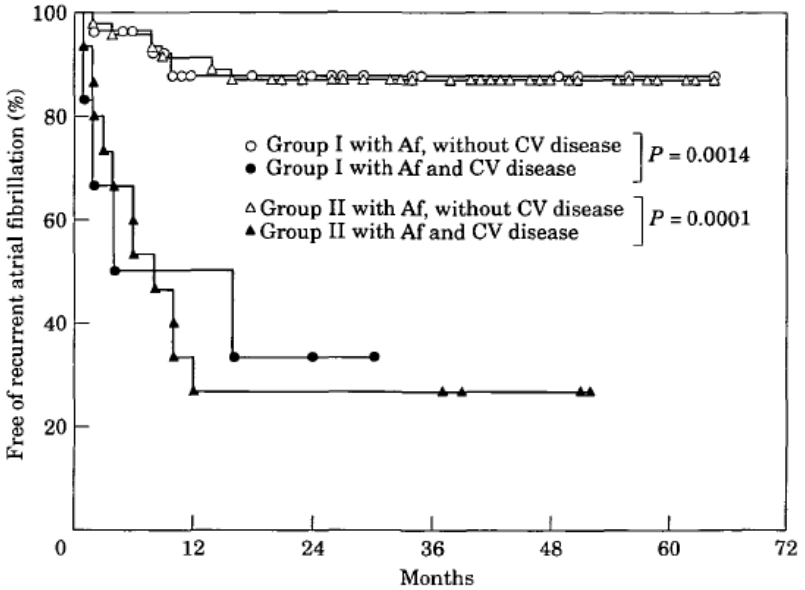
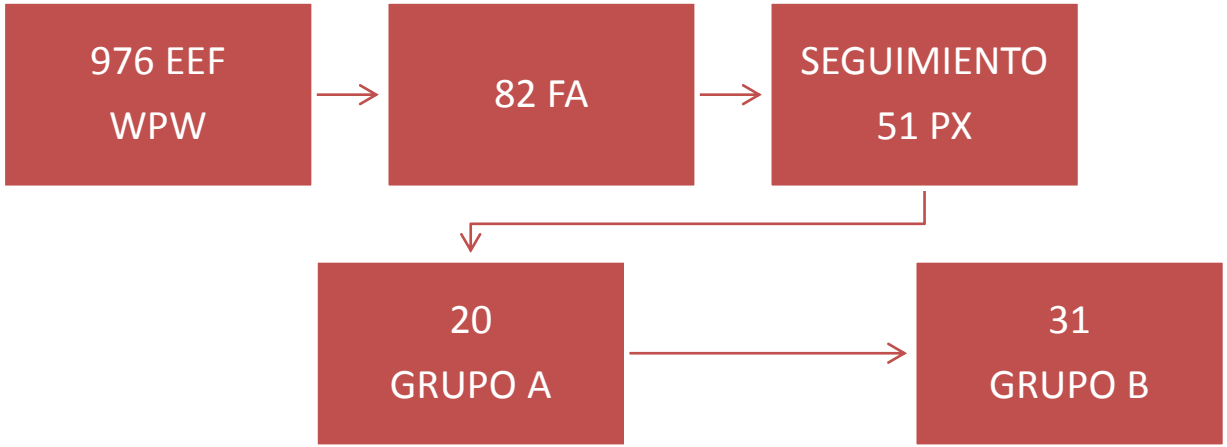


Figure 2 Kaplan–Meier analysis of recurrent atrial fibrillation after successful ablation in Groups I and II with prior atrial fibrillation (Af) according to the associated cardiovascular (CV) disease.

Dilemmas in AF



Group A: induced AF during EP study
Group B: At least one previous episode of documented AF.

RESULTADOS

-Clinical recurrence: 7.8%, more frequent in group with previous AF but associated with failed ablation.

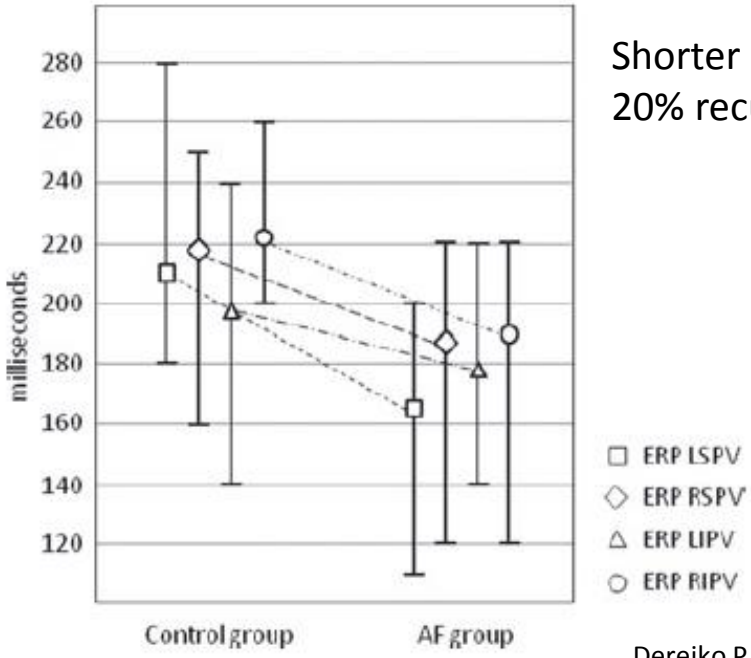
-Hemodynamic compromise and higher ventricular rates (207 vs 117), were more frequent in group with spontaneous AF (p=0.001, p= 0.0005)

- Older age and Hypertension were associated with AF

Tabla 1. Características por grupos de acuerdo a etiología de la FA

Variable	Inducida (n=20)	Espontánea(n=31)	P
Edad de inicio de síntomas (años)	28.4 ± 13.4	28 ± 17.0	0.920
Masculino	14 (70%)	26 (83.8%)	0.304
Cardiopatía asociada Ninguna Congénito HAS Isquémico Otros	 15 (75%) 3 (15%) 2 (10%) 0 0	 25 (80.6%) 2 (6.4%) 2 (6.4%) 1 (3.2%) 1 (3.2%)	0.521
Tipo de cardiopatía congénita Ebstein Otras (CIA, CIV)	 1 (5%) 2 (10%)	 1 (3.2%) 1 (3.2%)	0.564
Síntomas previos No Síncope Lipotimia Palpitaciones	 0 1 (3.2%) 0 15 (75%)	 2 (6.4%) 5 (25%) 5 (16.1%) 23 (74.1%)	0.016
Síntomas con la FA No Síncope Lipotimia Palpitaciones Disnea	 3 (15%) 3 (15%) 0 2 (10%) 0	 0 4 (12.9%) 11 (35.4%) 15 (48.3%) 1 (3.2%)	0.001
Inestabilidad hemodinámica	3 (15%)	20 (64.5%)	0.001
FVM durante FA	167.9±19.8	207.1±31.1	0.005
Meses de seguimiento	112(74-143)	124 (27-142)	0.615
Ablación exitosa de la VA	17 (85%)	27 (83.8%)	0.723
Recurrencia de pre-excitación No Si No aplica (ablación fallida)	 15 (75%) 2 (10 %) 3 (15%)	 24 (77.4%) 3 (9.6%) 4 (12.9%)	0.614
Arritmias en el seguimiento No FA Taquicardia auricular	 18 (90%) 1 (5%) 1 (5%)	 28 (90.%) 2 (6.4%) 1 (3.2%)	0.799

Dilemmas in AF



Shorter ERP of PVs in patients with AF
20% recurrence after Ablation of AP

Derejko P et al. J Cardivasc Electrophysiol 2012; 23

Dilemmas in AF

- Males
- Older age
- Previous AF
- Cardiovascular disease.
- Shorter ERP of PVs, spontaneous activity in PVs

Dilemmas in AF

- Identification
- Stablish hemodynamic status and risk of sudden death of VF.
- Avoid AV node blockers.
- Cardiovert and ablate

Dilemmas in AF

- Ablation of AP
- Close follow-up in patients at high risk
- Consider thromboprophylaxis (CHADS-Vasc)
- Consider PVA in patients with recurrence.

Conclusions

- AF with WPW might be a grave condition predisposing to sudden death.
- Adequate ECG identification is crucial.
- Hemodynamic stability should be the main concern.
- Electric Cardioversion is the preferred strategy in most cases, specially with high ventricular rates.
- Ablation of the AP should be the preferred strategy for definite treatment. Stablish risk for thromboembolisim, anticouagulate if necessary.
- Close follow up for possible recurrences in high risk groups.