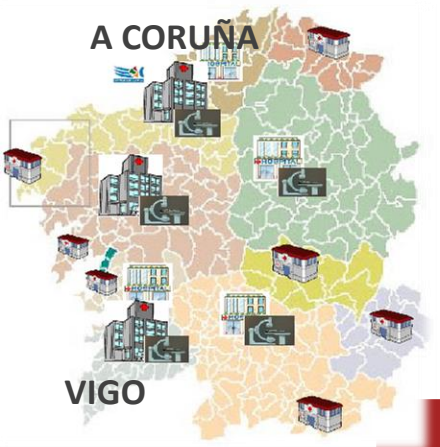
XI Reunión. Estado del Arte en
INSUFICIENCIA CARDIACA
PRÁCTICA CLÍNICA Y MODELOS ORGANIZATIVOS
Sede: Hotel Meliá MaríaPita, A Coruña
A CORUÑA 27-28 SEPTIEMBRE 2024

XI Meeting. State of the Art in
HEART FAILURE
CLINICAL PRACTICE AND ORGANIZATIONAL MODELS
Venue: Hotel Meliá MaríaPita, A Coruña
ACoruñaHF2024
A CORUÑA 27-28 SEPTEMBER 2024

Clinical Case: Drugs, devices & surgery

Milena Antúnez Ballesteros | *A Coruña, ES*

PATIENT PRESENTATION. 1ST ADMISSION



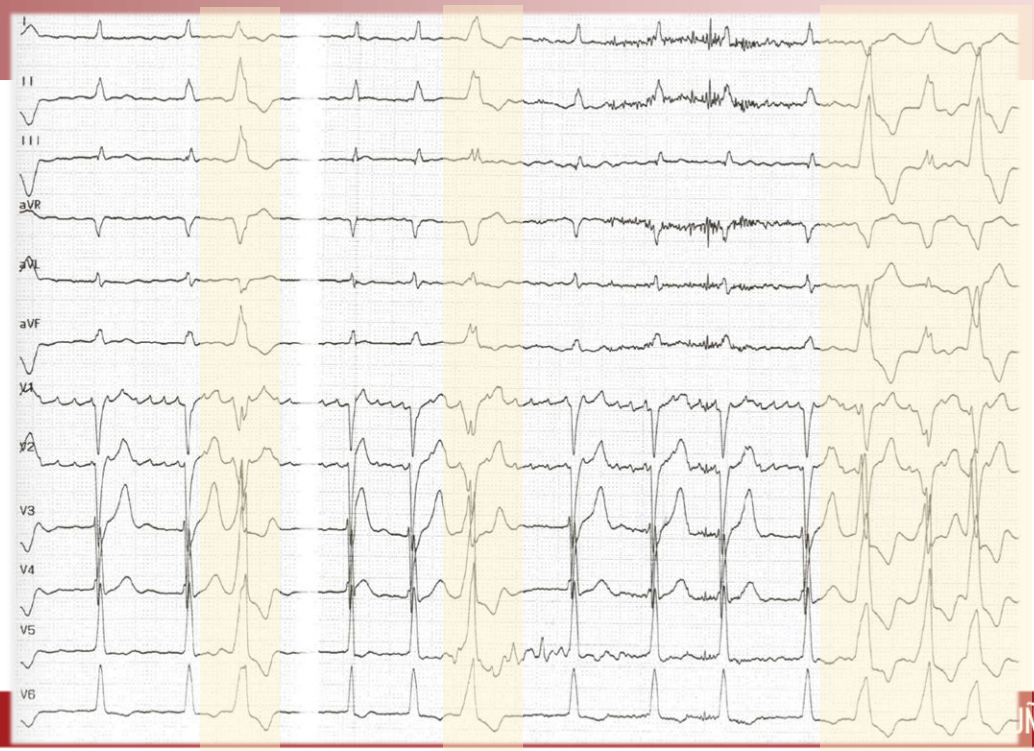
19/Oct/21
CHUVI

Former smoker, dyslipidaemia
Non-alcoholic fatty liver disease
Statin-induced myopathy
Mild SARS-CoV2 disease (July 2021).

CARDIOVASCULAR BACKGROUND
Syncope (2019, neuromediated).
- EKG: negative T wave V6, I, aVL.

1st Admission, emergency dept

Reduced exercise tolerance.
No chest pain, no palpitations
New onset atrial fibrillation (AF)
CHA_2DS_2VA score 0
Bisoprolol 1.25 od.
Preferent cardiac clinic.



HEART FAILURE DEBUT

19/Oct/21 CHUVI

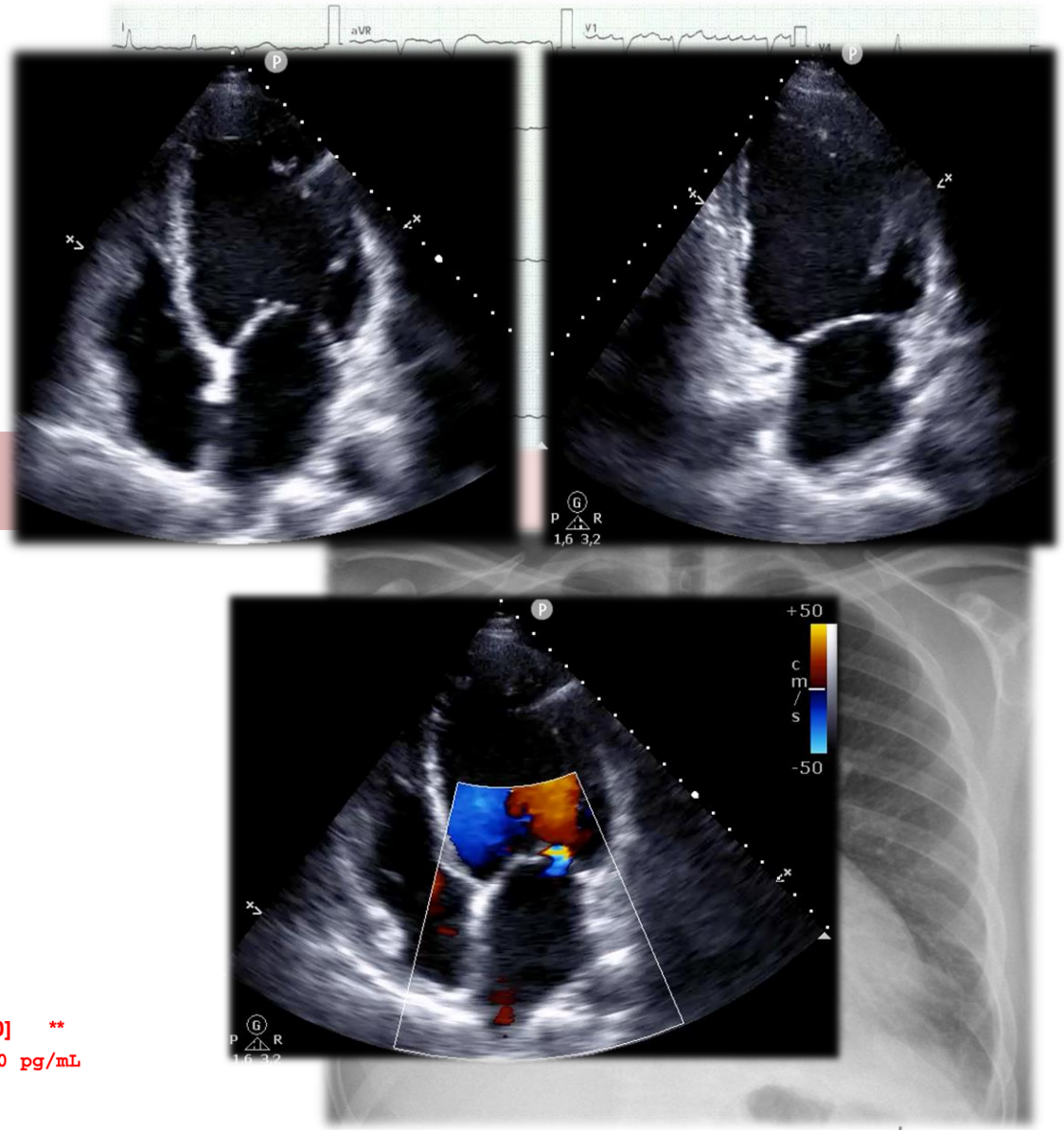
26/Oct/21 CHUVI

1st Admission, emergency dept

Early readmission

New onset atrial fibrillation

Rest dyspnoea, orthopnoea.
126/85, 70bpm, 98%. Congestion
AF, pleural effusion, hsTnI 58 (53)
SARS-CoV2 - / no inflammatory markers
TTE: **severe LV dysfunction,**
LV remodelling, mitral regurgitation
1st Heart Failure admission (ward)



Marcadores Cardíacos

Péptido natriurético NT-proBNP	3085	pg/mL	[5.0 - 125.0]	**

Insuficiencia cardíaca muy improbable si < 300 pg/mL

1ST HF ADMISSION, ¿AETIOLOGY?

Cardiac Resonance

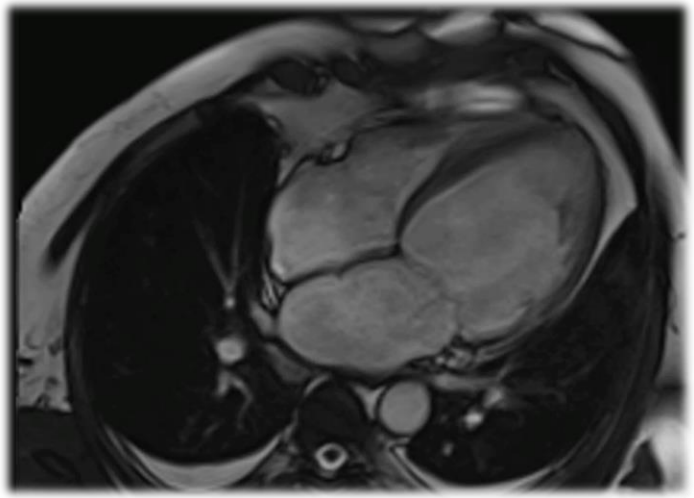
- Severely dilated LV. **LVEF 20%**
- Lateral transmural **late gadolinium enhancement**.
- **No oedema**. Normal T1/T2.
- Non dilated RV. Preserved RV function

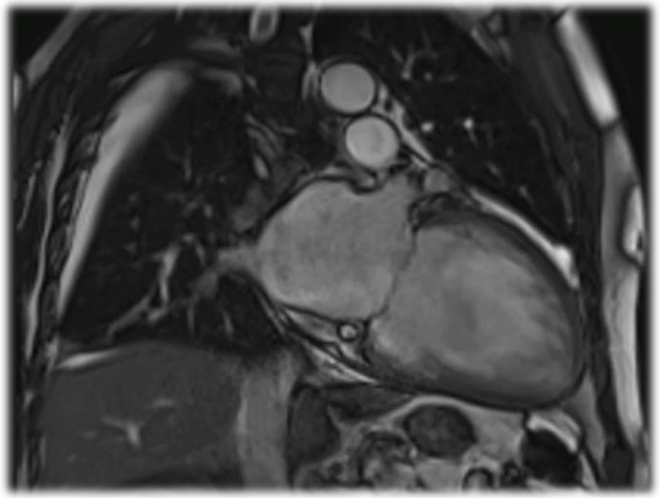
Coronary angiography

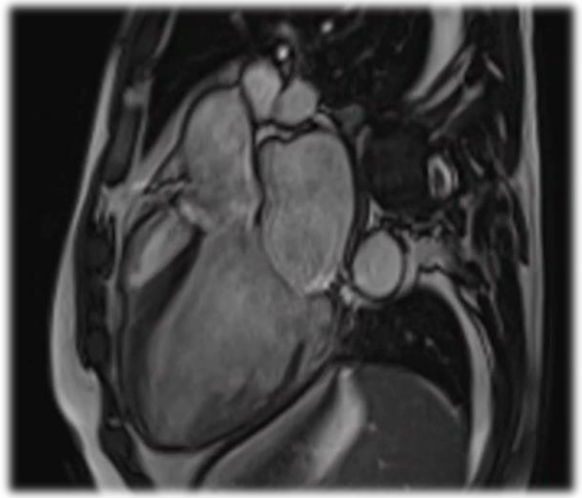
- Normal coronary arteries

Differential diagnosis

- Tachycardiomyopathy?
- Chronic SARS-CoV2 myocarditis?
- Dilated cardiomyopathy?
- Arrhythmogenic cardiomyopathy?
- Sarcoidosis?





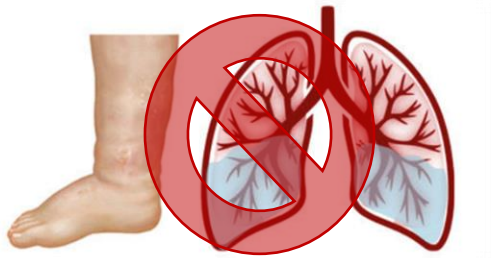


PRE-DISCHARGE ASSESMENT

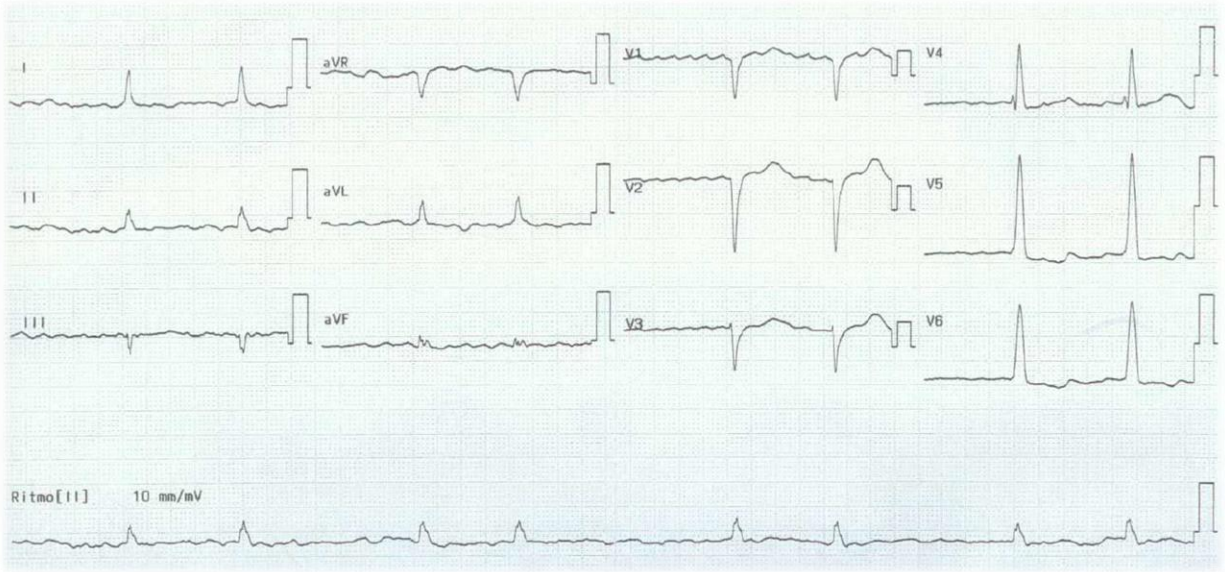
Management of HFrEF

To reduce mortality - for all patients

ACE-I/ARNI	BB	MRA	SGLT2i



- Sacubitril/Valsartan 24/26mg b.d.
- Dapagliflozin 10mg o.d.
- Bisoprolol 1.25mg b.d.
- Eplerenone 25mg b.d.
- Furosemide 20mg o.d.
- Atorvastatin 40mg o.d.
- Acenocoumarol



McDonagh TA, et al. *Eur Heart J*. 2021;42(36):3599-3726

EARLY FOLLOW UP/AETIOLOGY WORK UP

Oct-Nov/21 CHUVI

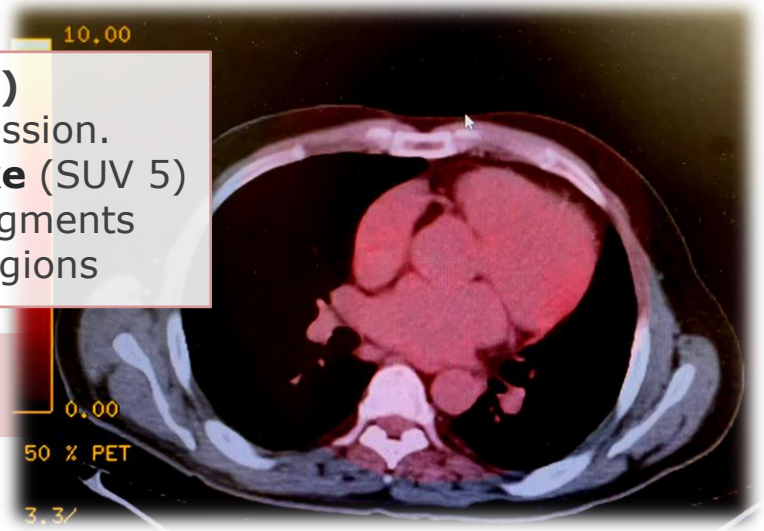
Dic/21 CHUVI

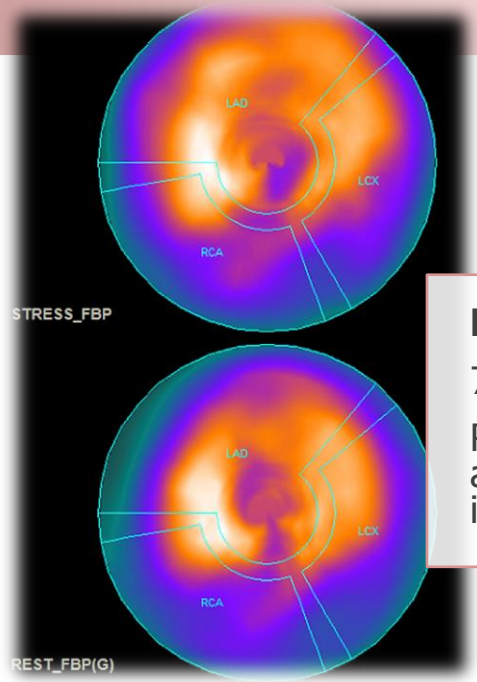
Atrial fibrillation

1st Heart Failure admission

Early post-discharge
NYHA II
+3kgs
SBP <90mmHg
Low dose GDMT
No possible up-titration

PET-CT (18-FDG)
Myocardial suppression.
Focal FDG uptake (SUV 5)
Lateral-inferior segments
No other active regions





Resting/stress SPECT
7 METs, 5:05m. LBBB-like
Reduced tracer uptake and retention in lateral-inferior segments

SECOND ADMISSION

Oct-Nov/21 | **Dic/21** | **Ene/22**

AF

1st HF admission

Early post-discharge
Some
PET/SPECT
Sarcoidosis?

Worsening HF. Admission
NYHA II, SBP 70-80mmHg
End-organ dysfunction (renal, liver) **¿Low output?**
No extracardiac sarcoidosis
LV Endomyocardial biopsy

No inflammatory infiltrate.
No granulomas
No amyloid

Lymphocyte subpopulation
ANA, Anticardiolipin, AntiB2glicoprotein, MPO/ANCA, PR3/ANCA
Proteinogram
ESR ↑

Bioquímica en Sangre

Glucosa	101	mg/dL	[73.0 - 100.0]	*
Urea	113	mg/dL	[10.0 - 50.0]	**
Creatinina	1.75	mg/dL	[0.7 - 1.3]	*
Filtrado Glomerular estimado	42	mL/min/1.73 m2		

Descenso moderado-severo: Compatible con ERC Estadío IIIb si datos persisten más de 3 meses.
Fórmula CKD-EPI. Individuos de raza negra: multiplicar el resultado por 1.159
No válida en Diálisis. Con limitaciones en: IRA, ascitis, anasarca, enfermedad hepática grave, masa corporal y/o estado nutricional extremos, embarazo, menores de 18 años.

Ácido Úrico	11.7	mg/dL	[2.4 - 7.2]	**
Sodio	138	mEq/L	[135.0 - 145.0]	
Potasio	5.06	mEq/L	[3.5 - 5.1]	
Cloro	101	mEq/L	[96.0 - 110.0]	
Colesterol	151	mg/dL	[100.0 - 200.0]	
Triglicéridos	256	mg/dL	[50.0 - 150.0]	*
Proteínas Totales	6.66	g/dL	[6.2 - 8.2]	
Albúmina	4.50	g/dL	[3.4 - 5.0]	
Calcio	9.5	mg/dL	[8.5 - 10.4]	
Fósforo	4.33	mg/dL	[2.4 - 4.9]	
Bilirrubina Total	1.14	mg/dL	[0.2 - 1.2]	
AST(GOT)	50	UI/L	[4.0 - 40.0]	*
ALT(GPT)	100	UI/L	[4.0 - 40.0]	*
GGT	289	UI/L	[1.0 - 75.0]	**
Fosfatasa alcalina	187	UI/L	[40.0 - 126.0]	*
LDH - Lactato Deshidrogenasa	214	UI/L	[85.0 - 240.0]	
PCR - Proteina C Reactiva	12.03	mg/L	[0.0 - 8.0]	*
Enzima convertidora de angiotensina	33.0	U/L	[20.0 - 70.0]	

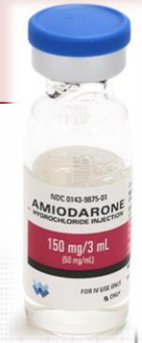
SECOND ADMISSION

- Mild improvement
- TOE + Cardioversion
- New attempt **GDMT**

- **Worsening** end-organ function
- **Incessant NSVT**

Bioquímica en Sangre

Glucosa	129	mg/dL	[73.0 - 100.0]	*
Urea	157	mg/dL	[10.0 - 50.0]	**
Creatinina	2.90	mg/dL	[0.7 - 1.3]	**
Sodio	135	mEq/L	[135.0 - 145.0]	
Potasio	4.00	mEq/L	[3.5 - 5.1]	
Cloro	98	mEq/L	[96.0 - 110.0]	
Albúmina	3.90	g/dL	[3.4 - 5.0]	
Calcio	9.1	mg/dL	[8.5 - 10.4]	
Magnesio	2.07	mg/dL	[1.6 - 2.5]	
Bilirrubina Total	1.53	mg/dL	[0.2 - 1.2]	*
ALT(GPT)	57	UI/L	[4.0 - 40.0]	*
Osmolalidad	303	mOsm/kg	[275.0 - 295.0]	**

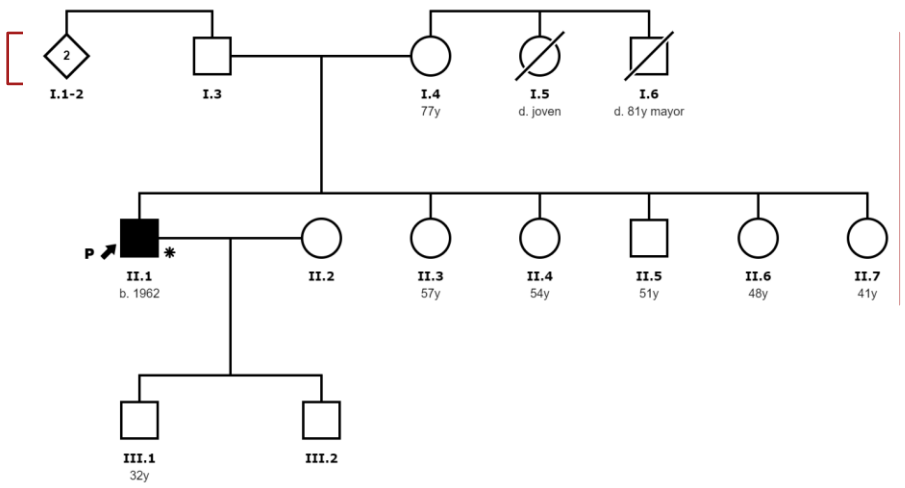


1ST REFERRAL TO TRANSPLANT HF UNIT

CHUVI (Vigo) | **CHUAC (A Coruña)**

Oct-Nov/21 | **Dic/21** | **Ene/22** | **Feb/22**

ELECTIVE WAITING LIST INCLUSSION 22-2-2022



PRETRANSPLANT ASSESSMENT

TRANSPLANT INDICATED NO CONTRAINDICATIONS

FAMILIAL/INHERITED CARDIOMYOPATHIES SPECIALIST ASSESSMENT

Low probability of sarcoidosis
No family history
Genetics (DCM/ARCM) ¿?

MEDICAL OPTIMIZATION

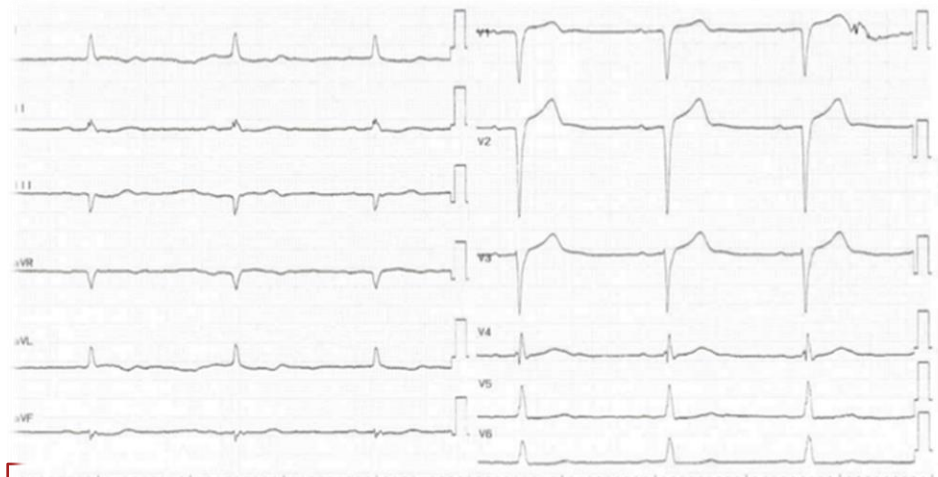
Low BB, ARM, iSGLT2, Amiod

DEVICES, ICD

Sudden death prevention

Crespo-Leiro MG et al. Eur J Heart Fail. 2018 Nov;20(11):1505-1535.

CLOSE FOLLOW UP (CHUAC+CHUVI CLINIC)



AF | 1st HF | Early post-discharge | WHF Admission | ELECTIVE WAITING LIST INCLUSSION

Coruña)

/22

CHUAC + CHUVI clinic

Feb/22-Feb/24

HF MEETING

Wating list EXCLUSSION 21-4-22

¿?
rovement
n, ICD

teral. Sospecha

"Fantastic four" Low doses. Tolerated low BP

Genetic testing: no pathogenic variant found

Clinical "**stability**". NT 1900 → 600. Cr 1.3
CPET: VO_2 23 (RER 1.17). No arrhythmias

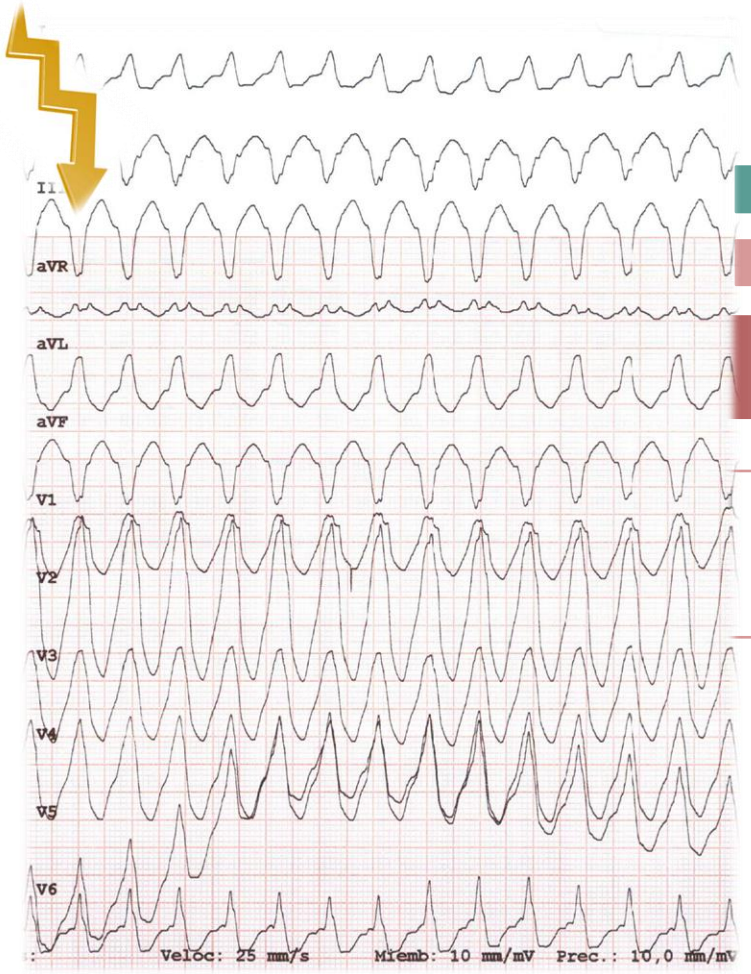
SVT (Sep/22). ATP x 3. Shock (x1)

↑QRS, 140ms (<150ms). ↑PR. VS 96%. Lateral scar. **No CRT-D upgrade**. Close VP follow-up

Severe functional MR: **TEER** (I/IV). Nov22

A Coruña Heart Failure Academy

READMISSION



CHUAC

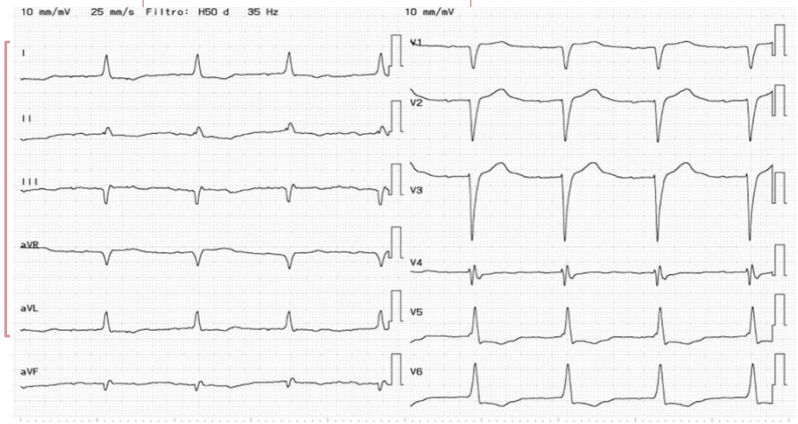
Feb/22

CHUAC + CHUVI

Feb/22-Feb/24

CHUVI

Mar/24



Bioquímica en Sangre

Glucosa	150	mg/dL	[73.0 - 100.0]	*
Urea	68	mg/dL	[10.0 - 50.0]	*
Creatinina	1.93	mg/dL	[0.7 - 1.3]	*
Sodio	139	mEq/L	[135.0 - 145.0]	
Potasio	4.90	mEq/L	[3.5 - 5.1]	

Chest pain, lightheadedness

BP 85/55. HR 150 bpm. No congestion

MSVT (150lpm).

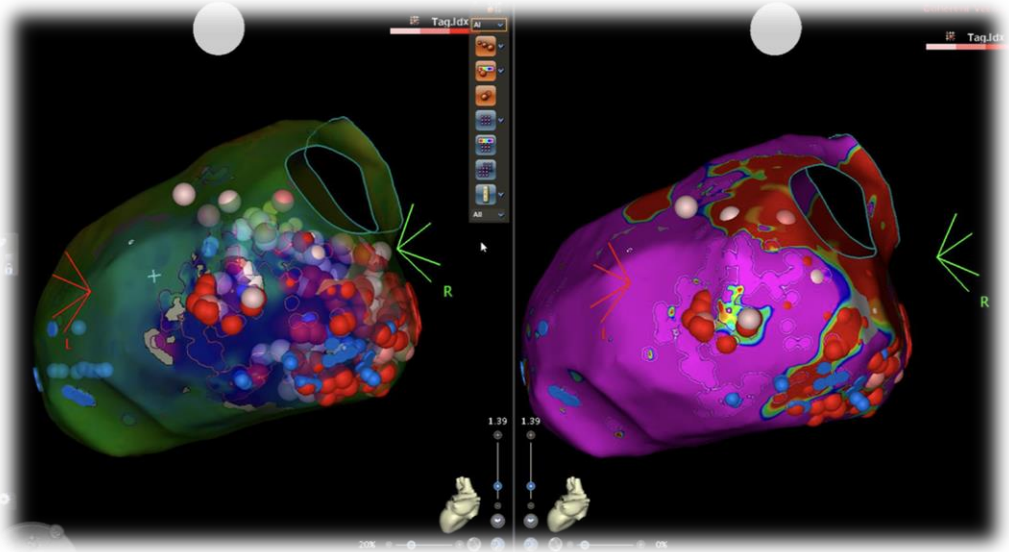
ATP x 3. Shock (35J). SR

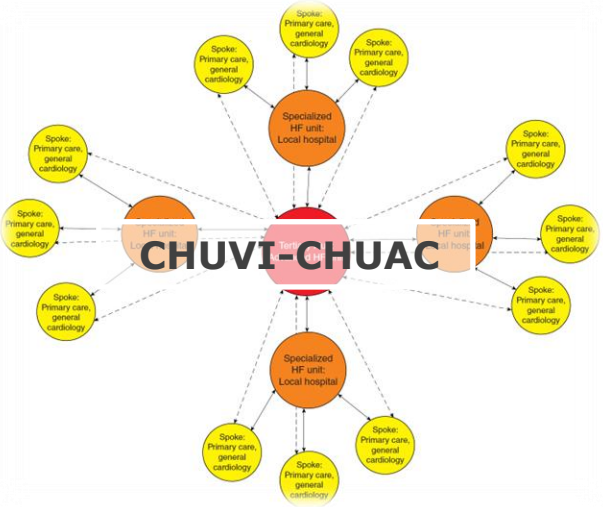
Intensive care unit admission

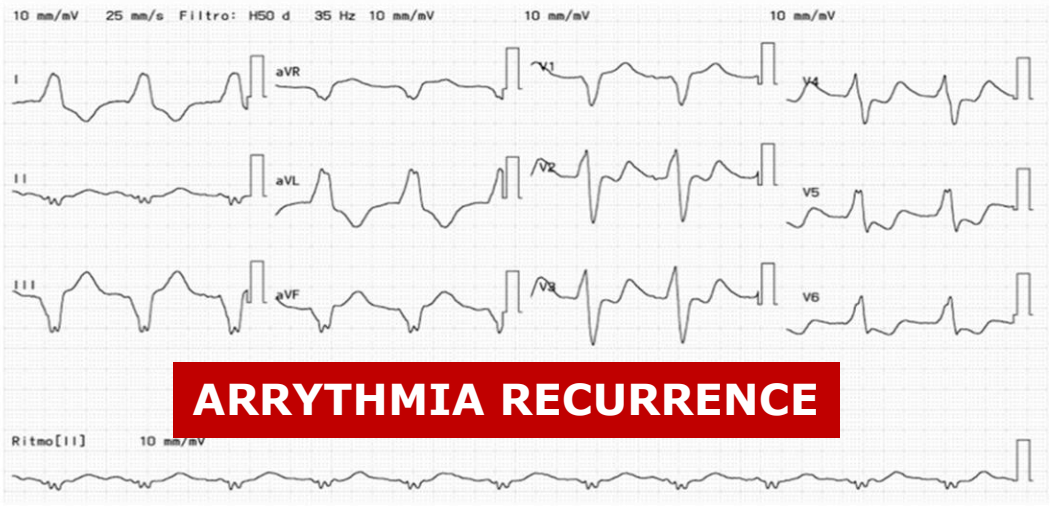
READMISSION

ELECTROPHYSIOLOGICAL STUDY

- LV mapping.
- Focus location: basal Inferior/Inferolateral.
- VT ablation (clinical).







ARRYTHMIA RECURRENCE

CHUAC (A Coruña)

RH ELE M

- Ar
- **El**
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  - Arrythmia worsening. **E**
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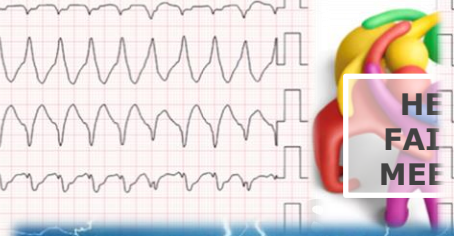

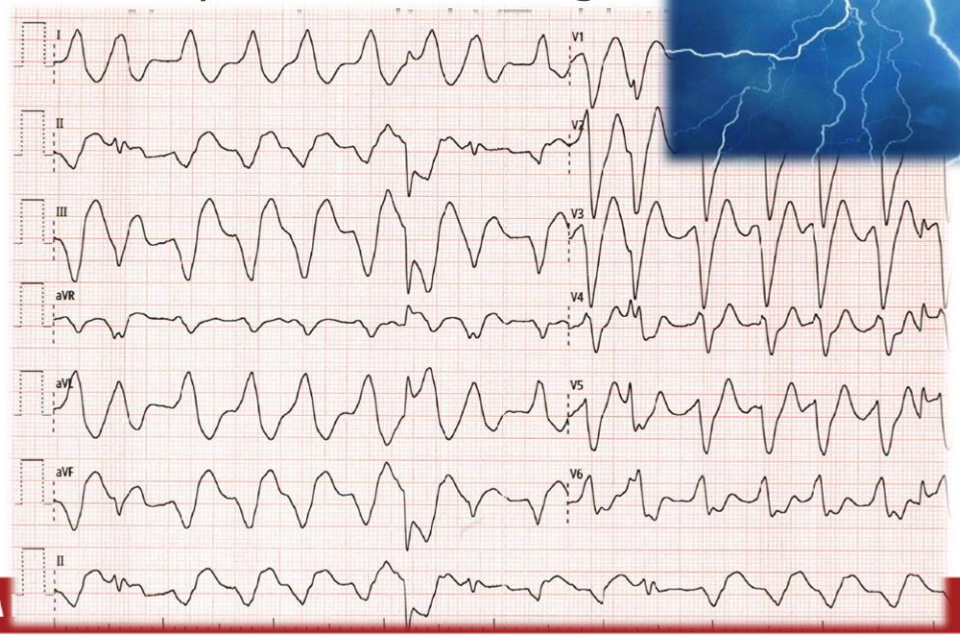

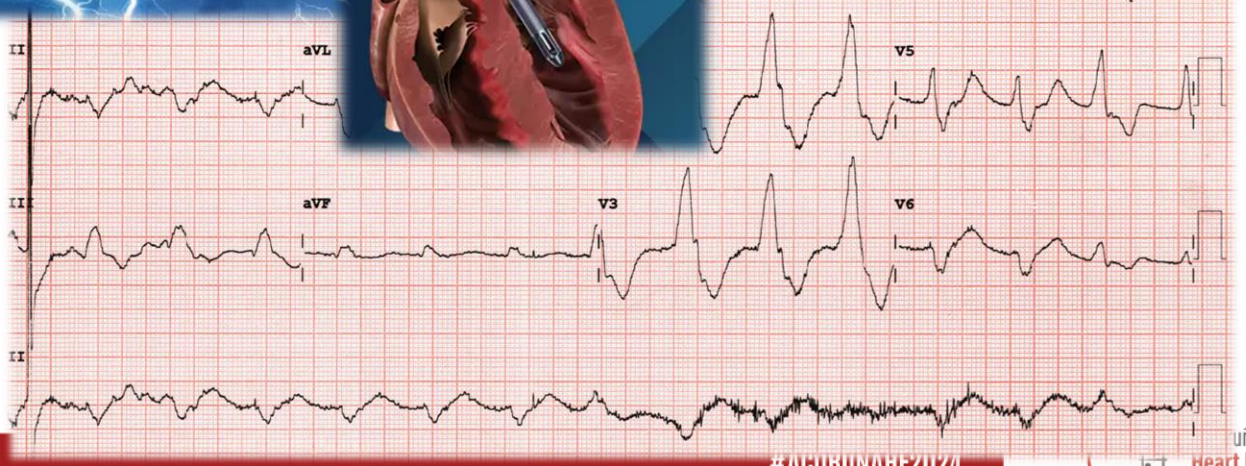

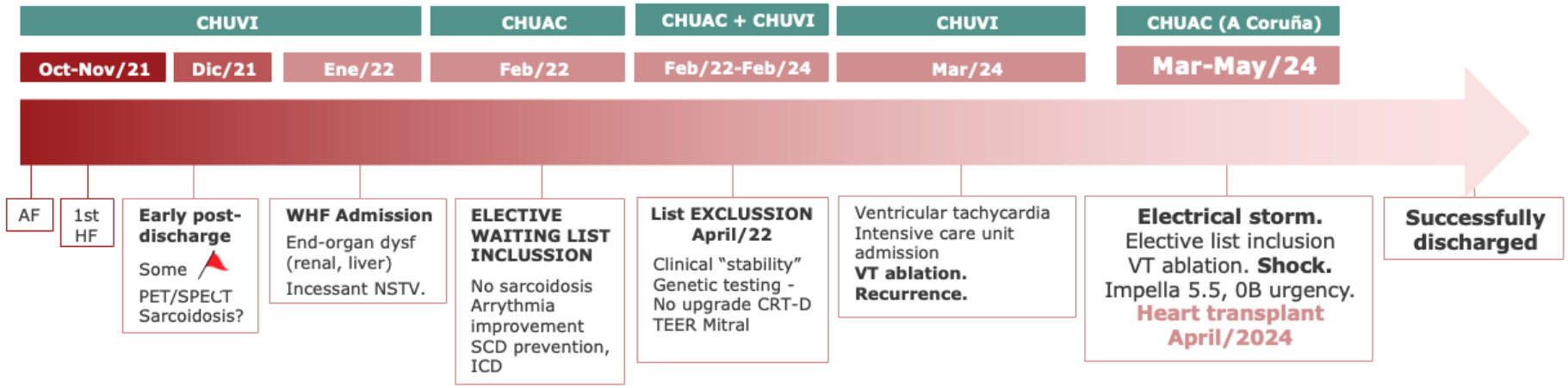

HISTOPATHOLOGIC EXAMINATION

Inflammatory cardiomyopathy

- Myocardiosclerosis/fibrosis
- Histiocytic infiltrates.
- No lymphocytic/eosinophilic infiltrates.
- No granulomas

TAKE HOME MESSAGES

- Heart failure is a **syndrome**, the end phase of lots of heart diseases, and **deep phenotyping** is essential.
- **Multidisciplinary** management in aetiology determination (cardiac image, inherited heart disease team…)
- Management of Heart Failure is an art, based on the synergy of **drugs, devices and interventions**.
- Pre-discharge and early post-discharge evaluation. Achieve full **congestion relief**/**GDMT optimization**.
- Be aware of **red flags of advanced heart failure** progression.
- **Arrythmia as a challenging scenery**. ¿Possible ablation **efficacy**? ¿Mechanical circulatory **support**?
- Don’t miss the **golden window**. Appropriate timing of referral. **Hub and Spoke** (CHUVI-CHUAC).


MUCHAS GRACIAS