

ECCMID 2017

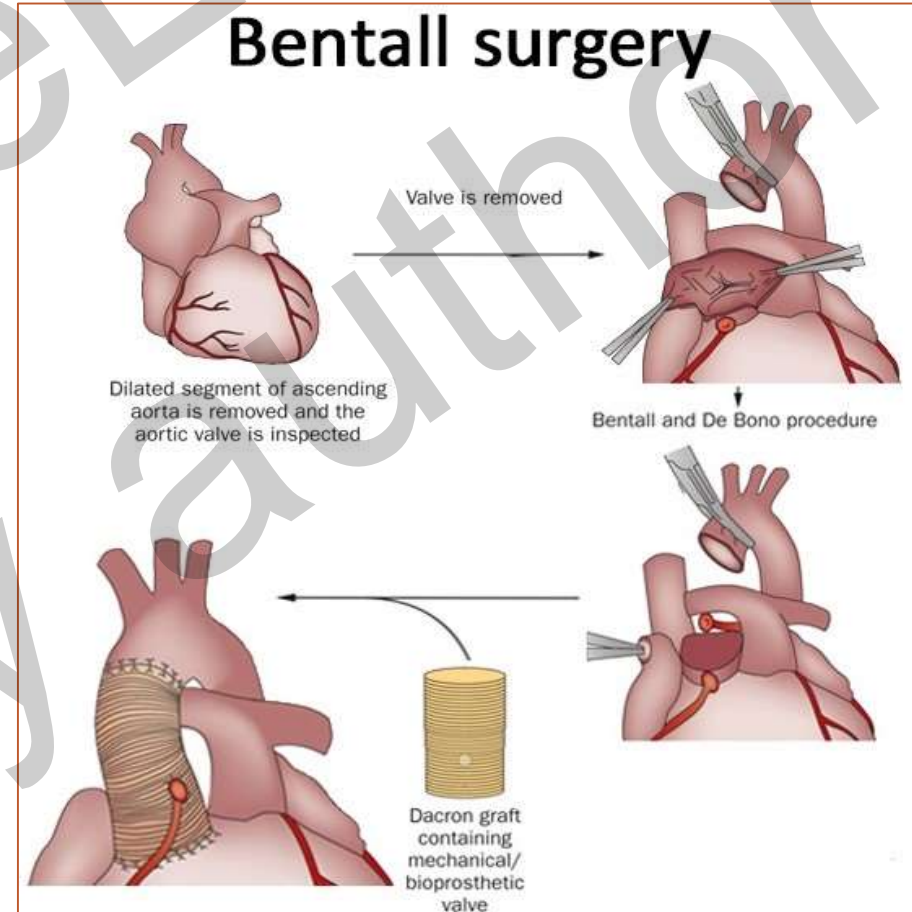
CLINICAL GRAND ROUNDS

PEDRO PUERTA-ALCALDE

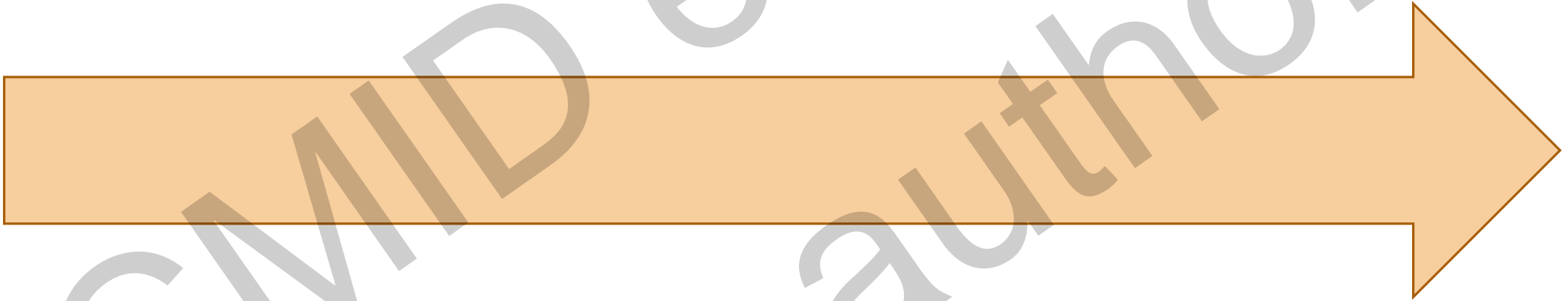
HOSPITAL UNIVERSITARI BELLVITGE, BARCELONA

CASE DESCRIPTION

- 78-year-old man
- He had not smoked for 15 years and drank occasionally
- Hypertension, hyperlipidemia and atrial fibrillation
- Aortic-valve replacement and repair of an aortic aneurysm (Bentall-deBono procedure) 6 years before



Asthenia, Malaise
5-kg weight loss
Inflammatory
dorso-lumbar pain

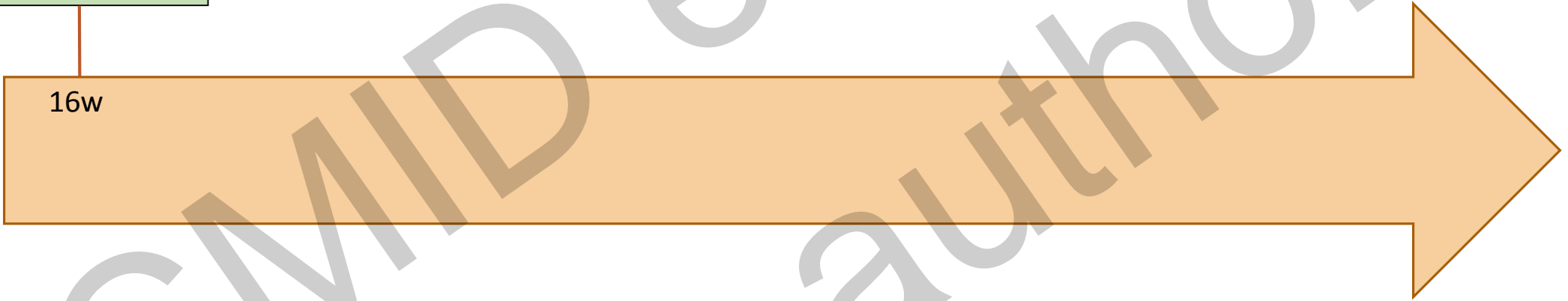


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Traumatologist.
CT scan: irregularity
of D11-D12
vertebral bodies and
disc degeneration

16w

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SPONDYLODISCITIS?

ADMISSION TO
HOSPITAL



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16w

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17w

RCP 193, ESR 136
BL CX: *S. gallolyticus*
subsp. *pasteurianus*
MRI: D11-D12
spondylodiscitis
Ceftriaxone + gentamicin
TEE: mitro-aortic
thickening 5.4 mm

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18w

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PANEL DISCUSSION



- What would you recommend at this point?
- Would you perform or repeat any imaging technique?
- Would you change the antibiotic or add a new one?

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REFERRED FOR CARDIAC
SURGERY EVALUATION



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20w

Low back pain
RCP 61, ESR 138
TEE: m-a thickening 8-9 mm

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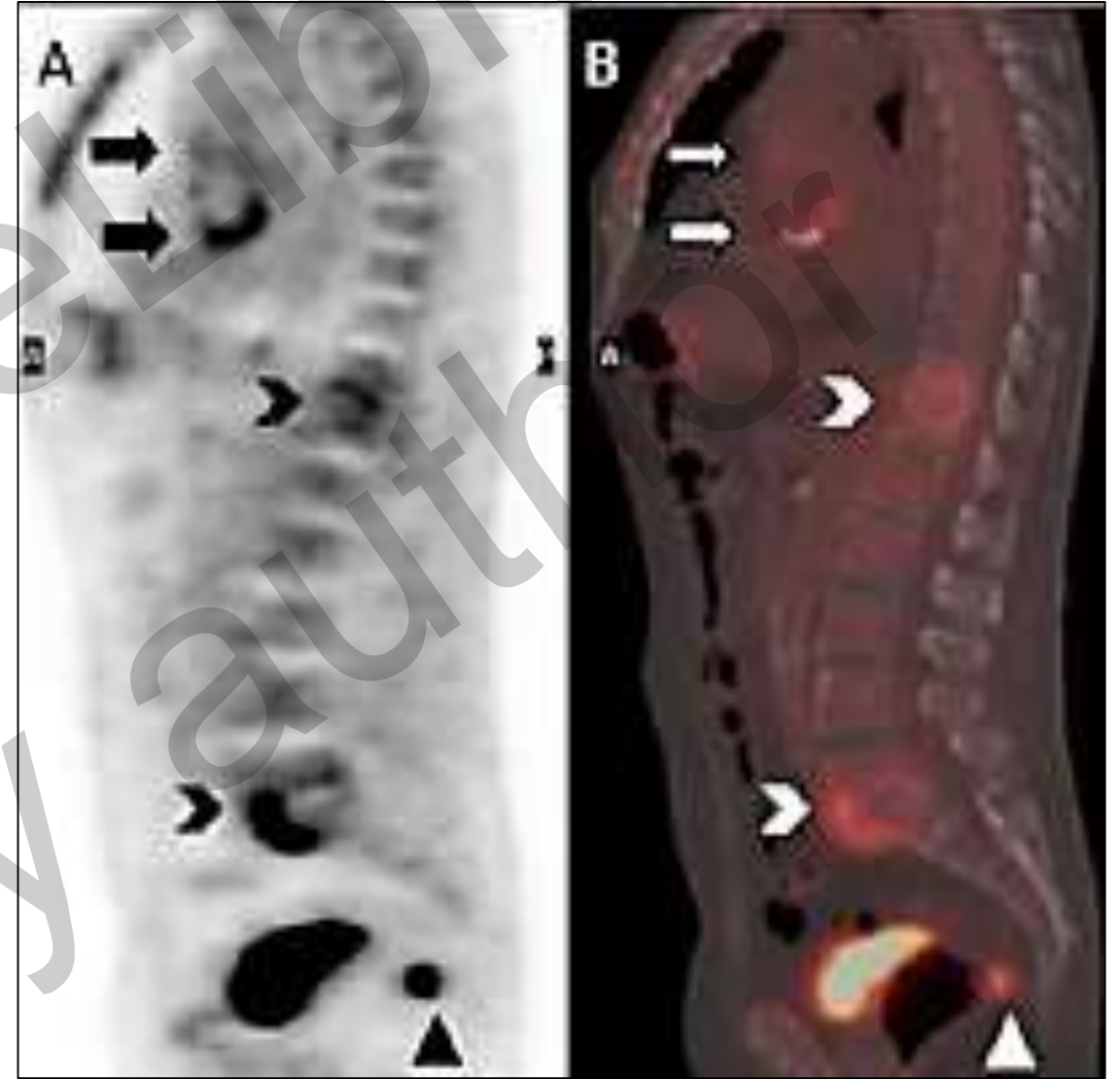
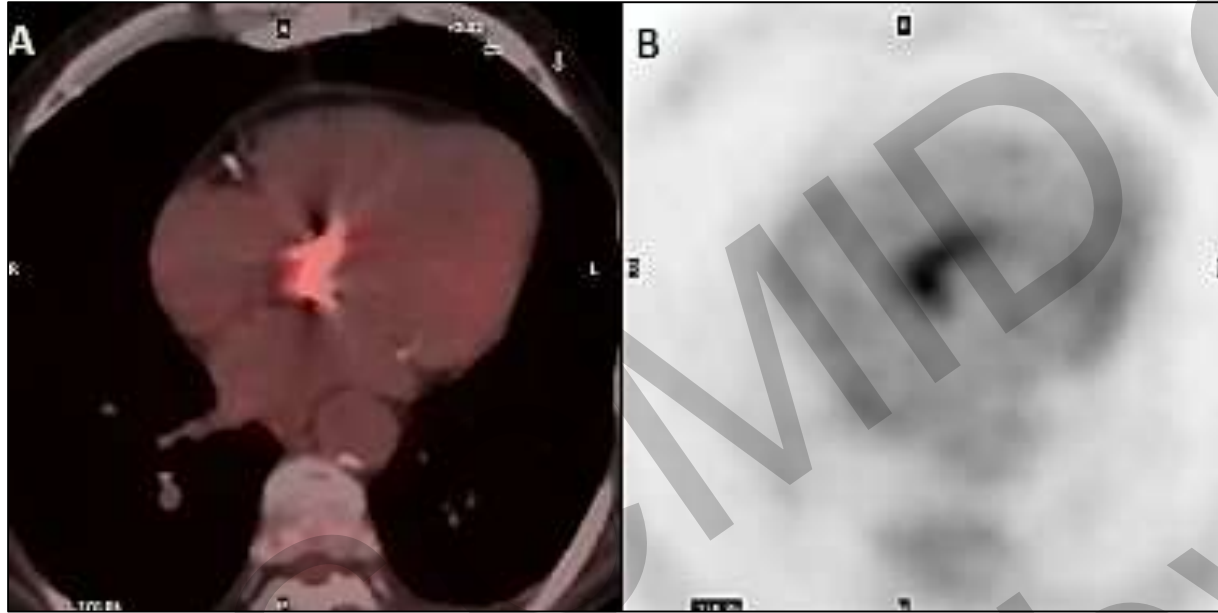
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PET/CT

Axial and sagittal images on PET/CT.



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TEE: mitro-aortic
thickening 5.4 mm

Colonoscopy: 4 polyps
1 high grade dysplasia

20w

TEE: m-a thickening 8-9 mm

PET/CT:

- i. Metabolic activity in
aortic prosthetic valve +
extension to prosthetic
aortic tube
- ii. Spondylodiscitis foci on
D11-D12 and L4-L5
- iii. Focal uptake in posterior
rectal wall

PANEL DISCUSSION



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Table 22 Indications and timing of surgery in left-sided valve infective endocarditis (native valve endocarditis and prosthetic valve endocarditis)

Indications for surgery	Timing ^a	Class ^b	Level ^c	Ref. ^d
1. Heart failure				
Aortic or mitral NVE or PVE with severe acute regurgitation, obstruction or fistula causing refractory pulmonary oedema or cardiogenic shock	Emergency	I	B	111,115, 213,216
Aortic or mitral NVE or PVE with severe regurgitation or obstruction causing symptoms of HF or echocardiographic signs of poor haemodynamic tolerance	Urgent	I	B	37,115, 209,216, 220,221
2. Uncontrolled infection				
Locally uncontrolled infection (abscess, false aneurysm, fistula, enlarging vegetation)	Urgent	I	B	37,209, 216
Infection caused by fungi or multiresistant organisms	Urgent/ elective	I	C	
Persisting positive blood cultures despite appropriate antibiotic therapy and adequate control of septic metastatic foci	Urgent	IIa	B	123
PVE caused by staphylococci or non-HACEK gram-negative bacteria	Urgent/ elective	IIa	C	
3. Prevention of embolism				
Aortic or mitral NVE or PVE with persistent vegetations > 10 mm after one or more embolic episode despite appropriate antibiotic therapy	Urgent	I	B	9,5872, 113,222
Aortic or mitral NVE with vegetations > 10 mm, associated with severe valve stenosis or regurgitation, and low operative risk	Urgent	IIa	B	9
Aortic or mitral NVE or PVE with isolated very large vegetations (> 30 mm)	Urgent	IIa	B	113
Aortic or mitral NVE or PVE with isolated large vegetations (> 15 mm) and no other indication for surgery ^e	Urgent	IIb	C	

PA

Patient related factors			Cardiac related factors		
Age ¹ (years)	<input type="text" value="0"/>	<input type="text" value="0"/>	NYHA	<input type="text" value="select"/>	<input type="text" value="0"/>
Gender	<input type="text" value="select"/>	<input type="text" value="0"/>	CCS class 4 angina ⁸	<input type="text" value="no"/>	<input type="text" value="0"/>
Renal impairment ² <small>See calculator below for creatinine clearance</small>	<input type="text" value="normal (CC >85ml/min)"/>	<input type="text" value="0"/>	LV function	<input type="text" value="select"/>	<input type="text" value="0"/>
Extracardiac arteriopathy ³	<input type="text" value="no"/>	<input type="text" value="0"/>	Recent MI ⁹	<input type="text" value="no"/>	<input type="text" value="0"/>
Poor mobility ⁴	<input type="text" value="no"/>	<input type="text" value="0"/>	Pulmonary hypertension ¹⁰	<input type="text" value="no"/>	<input type="text" value="0"/>
Previous cardiac surgery	<input type="text" value="no"/>	<input type="text" value="0"/>	Operation related factors		
Chronic lung disease ⁵	<input type="text" value="no"/>	<input type="text" value="0"/>	Urgency ¹¹	<input type="text" value="elective"/>	<input type="text" value="0"/>
Active endocarditis ⁶	<input type="text" value="no"/>	<input type="text" value="0"/>	Weight of the intervention ¹²	<input type="text" value="isolated CABG"/>	<input type="text" value="0"/>
Critical preoperative state ⁷	<input type="text" value="no"/>	<input type="text" value="0"/>	Surgery on thoracic aorta	<input type="text" value="no"/>	<input type="text" value="0"/>
Diabetes on insulin	<input type="text" value="no"/>	<input type="text" value="0"/>			
EuroSCORE II	<input type="text" value="0"/>				
EuroSCORE II					
<small>Note: This is the 2011 EuroSCORE II</small>	<input type="button" value="Calculate"/>	<input type="button" value="Clear"/>			



High surgical risk
Clinical stability
S. gallolyticus



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Colonoscopy: 4 polyps
1 high grade dysplasia

TEE: m-a thickening 6mm
↓
SURGERY RULED OUT

22w

20w

TEE: m-a thickening 8-9 mm
PET/CT:
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SURGERY RULED OUT

Amoxicillin 1g/8h
Patient discharged

22w

25w

20w

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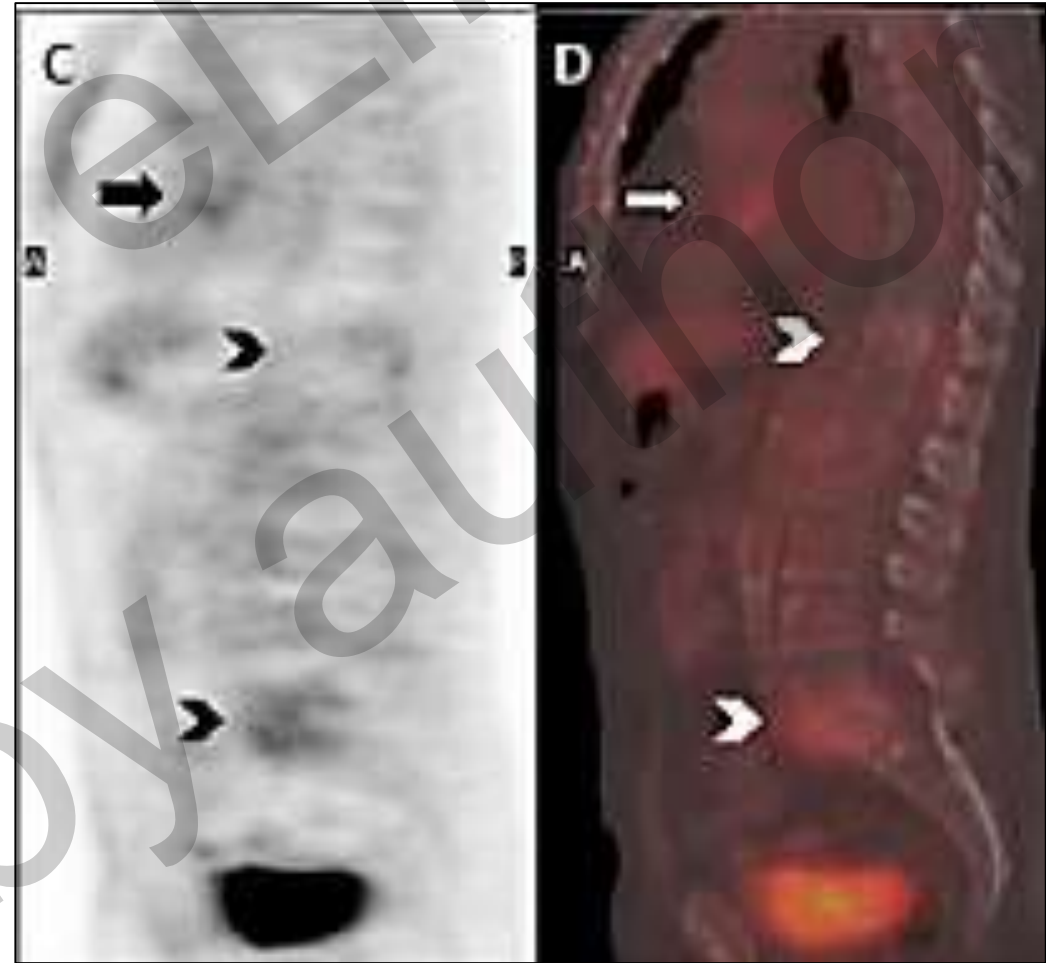
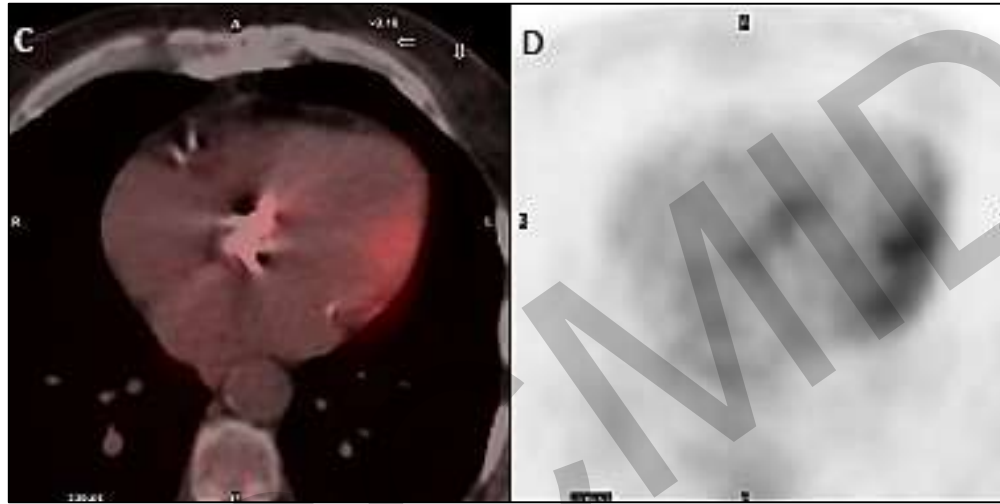
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35w

TEE: decrease in
thickening to 3 mm
PET/CT: high
reduction of the
mitro-aortic uptake

Axial and sagittal images on PET/CT at week 18 of antibiotic treatment.



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20w

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PET/CT:

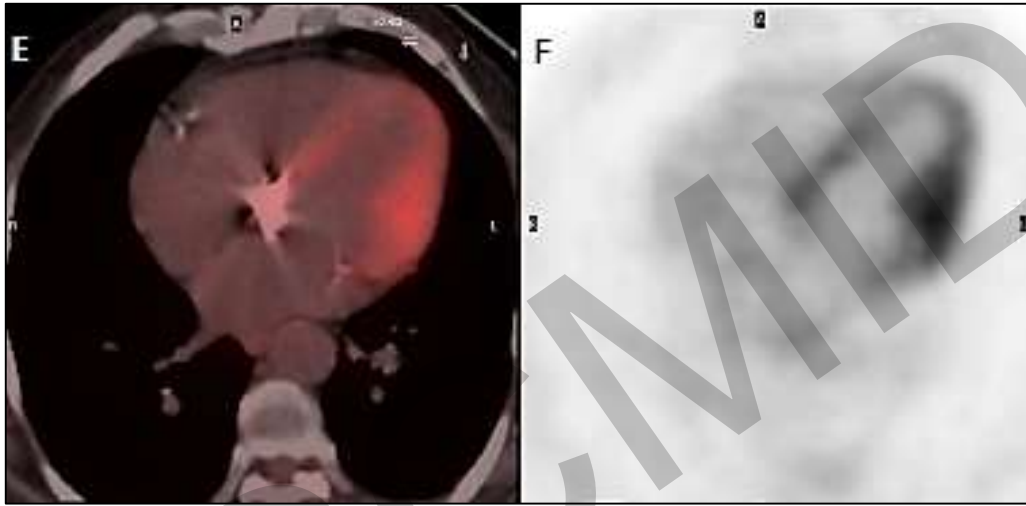
- Minimal activity at
the annular ring
- Resolution of dorsal
and lumbar uptake

46w

35w

TEE: decrease in
thickening to 3 mm
PET/CT: high
reduction of the
mitro-aortic uptake

Axial and sagittal images on PET/CT at week 29 of antibiotic treatment.



FOLLOW UP

1 week Gentamicin
3mg/kg/d +
Ceftriaxone 2g/d

7 weeks
Ceftriaxone 2g/d

10 months
Amoxicillin 1g/8h

- Antibiotic treatment was discontinued after 12 months
- Patient asymptomatic and fully recovered
- Periodical PET/CT and TEE follow-up

FOLLOW UP

- Recently, PET/CT control (image not available) showed a slightly increase in uptake
- RCP, ESR and leukocytes are normal
- Blood cultures are negative



WHAT SHOULD WE DO NOW?

TAKE-HOME MESSAGES

- Risk-benefit evaluation of surgery is essential to decide the management of these patients
- PET/CT increases the sensitivity of Duke criteria in prosthetic valve endocarditis and detects metastatic septic emboli and occult primary tumors, even when clinically silent
- Metabolic activity measured by PET/CT can be employed to monitor response to treatment



**DANKE
SCHÖÖN!!!**

Authors: Pedro Puerta-Alcalde, Guillermo Cuervo, Antonella F. Simonetti,
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