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# *Clinical session*

*Unknown Fever*

Three of a kind

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*João Sequeira, Portugal*

ESIM-12

*London, UK*

September, 2009

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## *Current disease*

- Male patient, 71 years of age
  - Admission:
    - Fever of unknown origin (6 months)
    - Weight loss (10 % of usual weight in one year)
    - Liver function abnormal lab results
      - ↑ AST (108 U/L)
      - ↑ ALT (146 U/L)
      - ↑  $\gamma$ -GT (2515 U/L)
      - ↑ Alkaline Phosphatase (1317 U/L)
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## *Current disease*

- Previous events

- ❑ Emergency cholecystectomy, 7 years ago
  - ❑ No symptoms since then
  - ❑ Antrum gastritis (one year ago)
  - ❑ Prostate benign hyperplasia
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## *Current disease*

### ■ One year earlier

- Dyspepsia with fat-rich food ingestion

### ■ Six months earlier

- Fever of unknown origin lasting until present time
- Intermittent fever ( $\sim 38^{\circ}\text{C}$ ), rigors and chills
- Isolated episodes of short duration (less than 24 hours)
- These episodes occurred repeatedly in 6 to 7 days interval
- Temperature returned to normal with acetaminophen (1 g)
- Patient denied jaundice, acholic stools, choluria or pruritus

### ■ Internal Medicine referral

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## *Inspection*

- Normal neurological examination
  - No fever. No jaundice.
  - Lymph nodes not palpable
  - Normal pulse and blood pressure
  - Normal chest observation
  - Normal abdominal examination
  - No liver or spleen enlargement
  - Limbs without abnormalities
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## *Lab results*

Hemoglobin	11.3 gr/dL	AST	108 U/L
MCV	88.1 fL	ALT	146 U/L
Leukocytes	10 400 / $\mu$ L (67% N)	Alk Ph	1 317 U/L
Platelets	391 000 / $\mu$ L	$\gamma$ -GT	2 515 U/L
Urea	52 mg/dL	Bilirrubine 30'	1.1 mg/dL
Creatinine	1.5 mg/dL	Cholesterol	203 mg/dL
Sodium (Na <sup>+</sup> )	141 mmol/L	LDL-C	114 mg/dL
Potassium (K <sup>+</sup> )	3.7 mmol/L	HDL-C	72 mg/dL
Calcium (Ca <sup>2+</sup> )	10.1 mg/dL	Triglycerids	87 mg/dL
Phosphate (P)	4.8 mg/dL	INR	1.0
Glucose	82 mg/dL	APTT	31.3 / 28.9''
Uric acid	5.7 mg/dL	D-dimer	0.3 $\mu$ g/dL
Albumin	4.6 gr/dL	ESR	51 mm/h
Troponin-I	<0.020 $\mu$ g/L	C-RP	8.9 mg/dL
Myoglobin	57 $\mu$ g/L		
BNP	109 pg/dL		

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## *Lab results*

### Viral immunology

- IgG CMV **positive**
- IgG EBV (EBNA and VCA) **positive**
- IgM CMV and EBV negative
- VIH negative
- Ag HBs negative
- Ab HBc negative
- Ab VHC negative
- Ab VHA negative

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## *Other exams*

- Chest X-ray:
    - No changes
  
  - EKG:
    - Sinus rhythm
    - QRS Axis =  $30^{\circ}$
    - No conduction disturbances
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## *Evolution*

- During first week in hospital:
    - No fever
  
  - Upper digestive endoscopy:
    - Antrum gastritis
    - Helicobacter *Pylori* +
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*Intermission*

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*Three of a kind (1934 - 1947)*



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## *Evolution*

- On the 7th day
    - Fever (38 ° C)
    - Positive blood cultures (*Escherichia coli*)
    - Ciprofloxacin, 400 mg, 12/12 h, IV
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## *Evolution*

- Fever pattern

- One day duration
  - 6/7 days interval without fever
  - Mild jaundice
  - Choloria
  - Acholic stools
  - ↑ Bilirrubine 30': 1.1 → 2.1 → 0.7 mg/dL (mainly 1')
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## *Evolution*

- Abdominal CT scan and ecography
    - Mild hepatomegaly
    - Hepatic steatosis
    - Normal biliary duct
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## *Evolution*

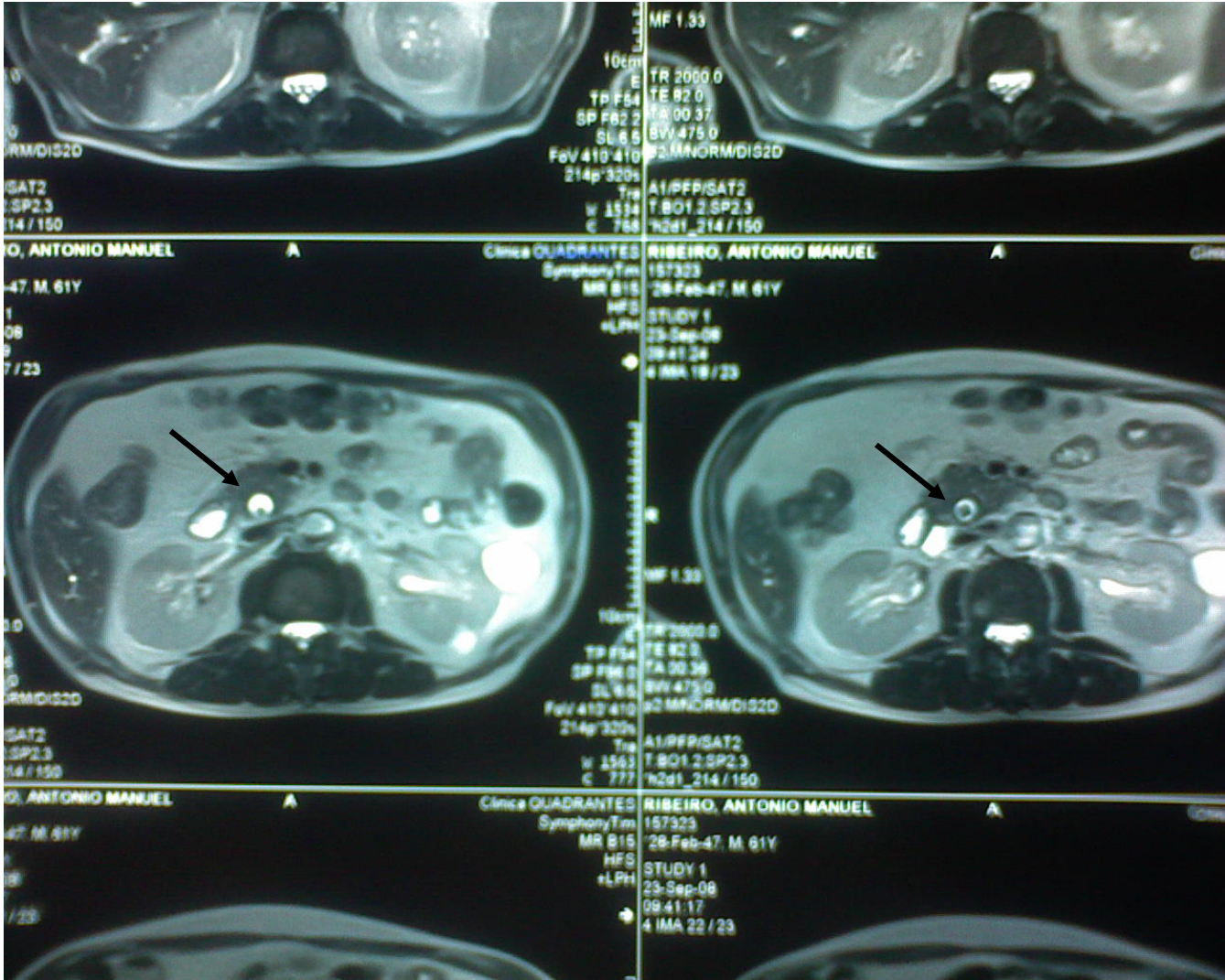
- **Hepatic Magnetic Resonance**

- Dilatation of intra-hepatic biliary duct and common bile duct
  - Choledochus distal extremity showing several images with blank signal
  - Multiple biliary stones in ampulla of Vater (largest with 8 mm diameter)
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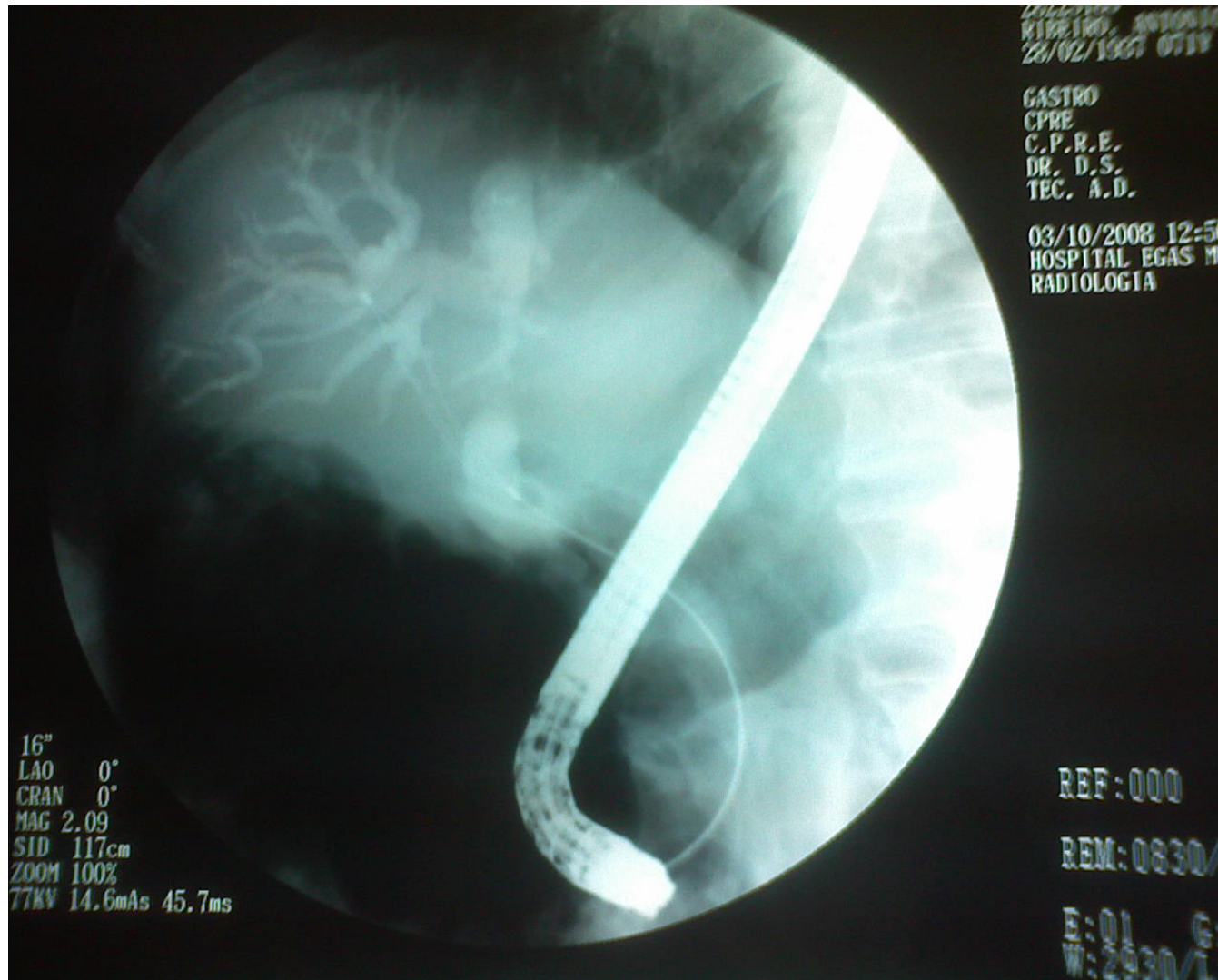
# Hepatic MR



# Hepatic MR



# ERPC



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## *Evolution*

ERCP:

Moderate dilatation of common bile duct

Subtraction images in distal portion

Endoscopic sphincterectomy (12 mm)

Removal of 3 pigmented biliary stones

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# ERPC

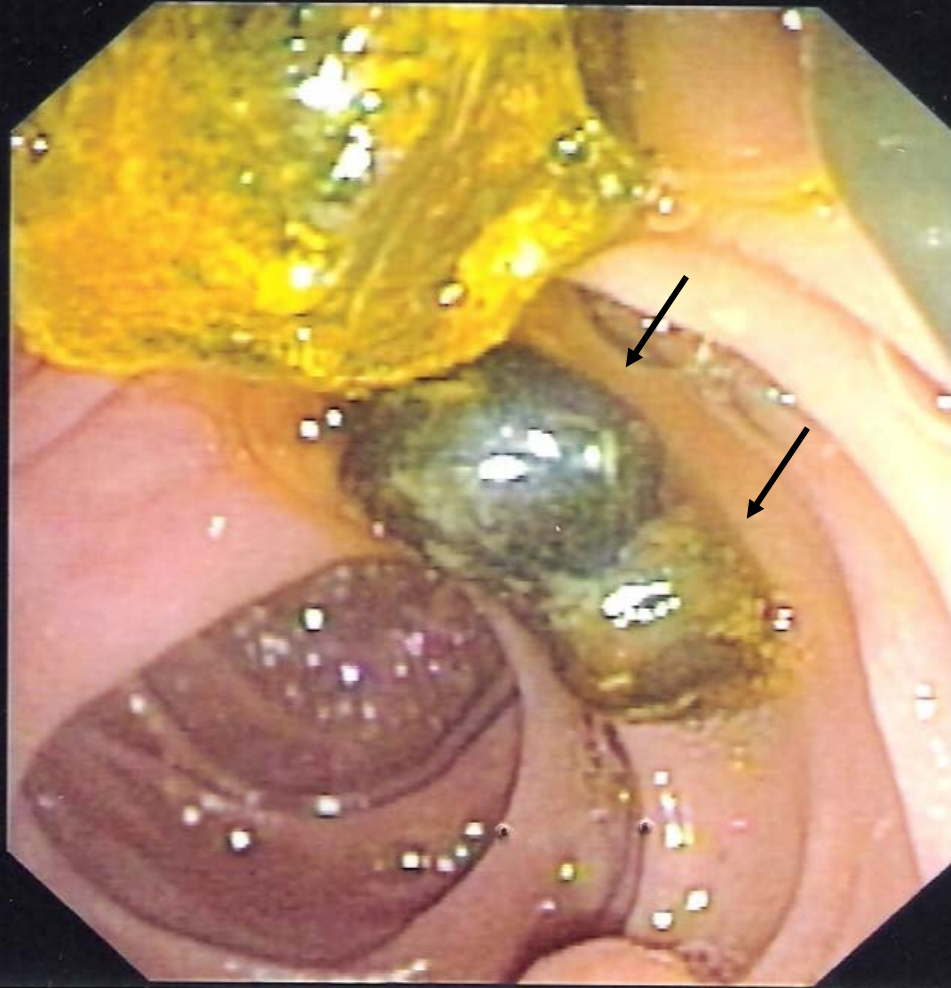
/z`  
Name :

Sex : Age :  
D. O. Birth :

03/10/2008  
11:41:01

CVP :  
D. F :  
Em:5 Gr:N

Physician :  
Comment :



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## *Evolution*

Steady clinical improvement

Progressive normalization of liver lab results

No fever relapse

Full weight recovery

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## *Final considerations*

Common bile duct biliary stones (choledocholithiasis)

Intermittent septic episodes ( “*part-time*” cholangitis)

Importance of intermittent fever 6/7 days

Differential diagnosis with ampulloma

Importance of *E.Coli* bacteremia  
(in suspicion of obstructive biliary disease)

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*Three of a kind*

*(2008)*



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## *Three of a kind (1934 - 1947)*

