

**PROGRESSION AND RESOLUTION OF RBBB
CASE REPORT**

FINAL DIAGNOSIS

PROF. DR. PAUL LEVINE

Dear colleagues: I'm sending this interesting ECGs sequence of my dearest and admired friend Prof. Dr Paul Levine. We would like to hear your valuable opinions.

Thank in advance.

Andrés Pérez Riera

Prezados colegas estou enviando este interessante ECGs seqüência de meu querido amigo Prof. Dr Paul Levine(Loma Linda International Heart Institute) Nos gostaria ouvir suas opiniões.

Portuguese translation

Relato do caso

Andres, Eu apreciaria muito sua orientação e de outros membros do foro de arritmias ECG em referencia a serie de ECGs adjuntos.

Em 2008 este jovem homem de aproximadamente 40anos tinha um padrão de BIRD. Em 2009 ele apresentava CRBBB com desvio do eixo para esquerda. Em 2010 o bloqueio de ramo desapareceu. As FC nunca foram elevadas o BRD taquicárdico-dependente.

Sua Pressão arterial é normal. Seu ECG desde 2010 estas sendo acompanhado com exames de sangue periódicos e Rx de tórax e função pulmonar. Ele não fuma.

Minha recomendação foi nada em especial mais apenas acompanhamento anual em relação a sintomas como sincope , presincope e dispnéia etc. Ele faz exercícios regularmente. Mas eu não tenho visto este padrão inicial de piora de um distúrbio domótopo intraventricular seguido de uma quase normalização tardia em seu ECG de 12 derivações

Obrigado pela sua ajuda

De: Paul Levine <mailto:paul91321@gmail.com>

Enviada em: terça-feira, 24 de agosto de 2010 21:07

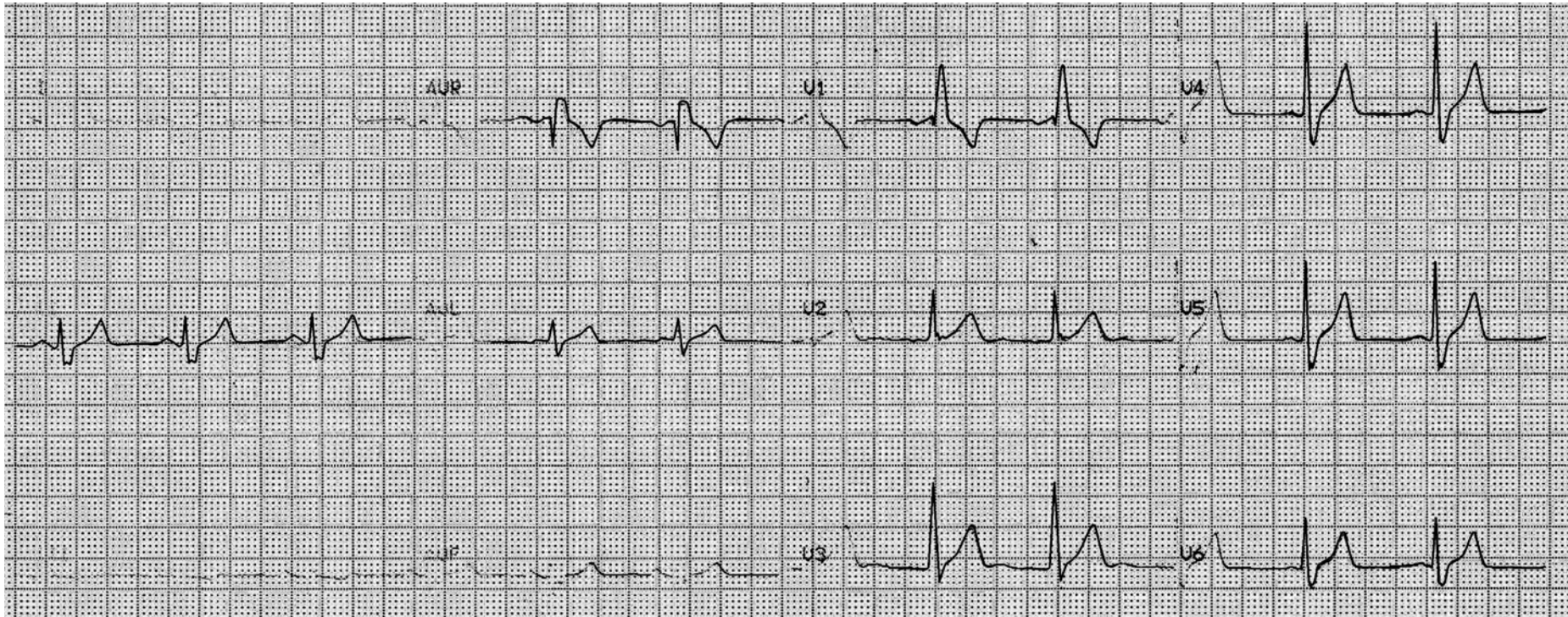
Para: riera@uol.com.br

Assunto: FW: Progression and resolution of RBBB

Male, 39yo

FIRST ECG

May 2008



HR = 72bpm

P = 110ms - P Axis = +80°

PR = 140ms

QRSd = 128ms - QRS axis = +20°

QT/QTc = 384/423ms

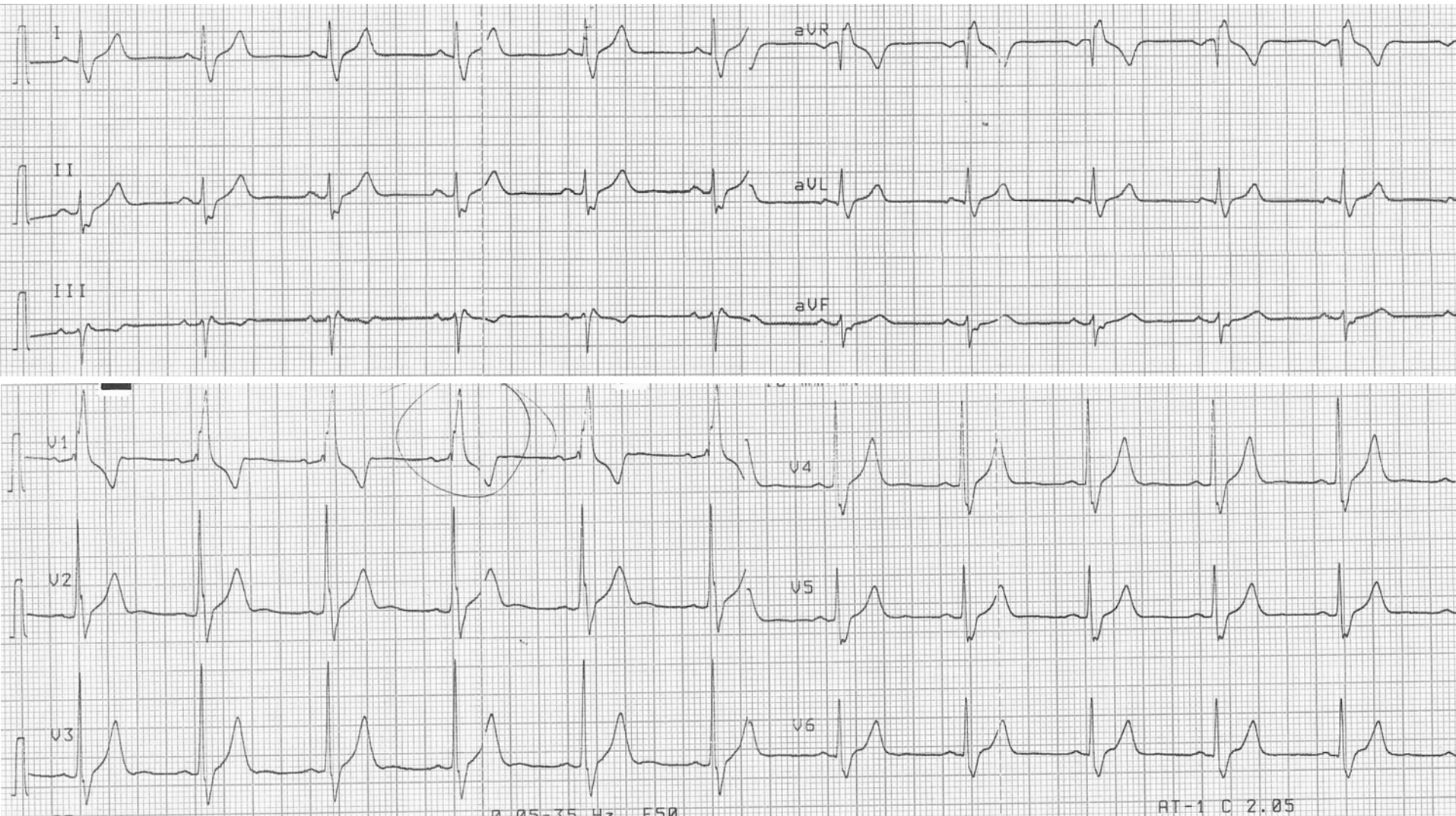
RR/PP = 826/825ms

T Axis = +25°

Male, 40yo

SECOND ECG

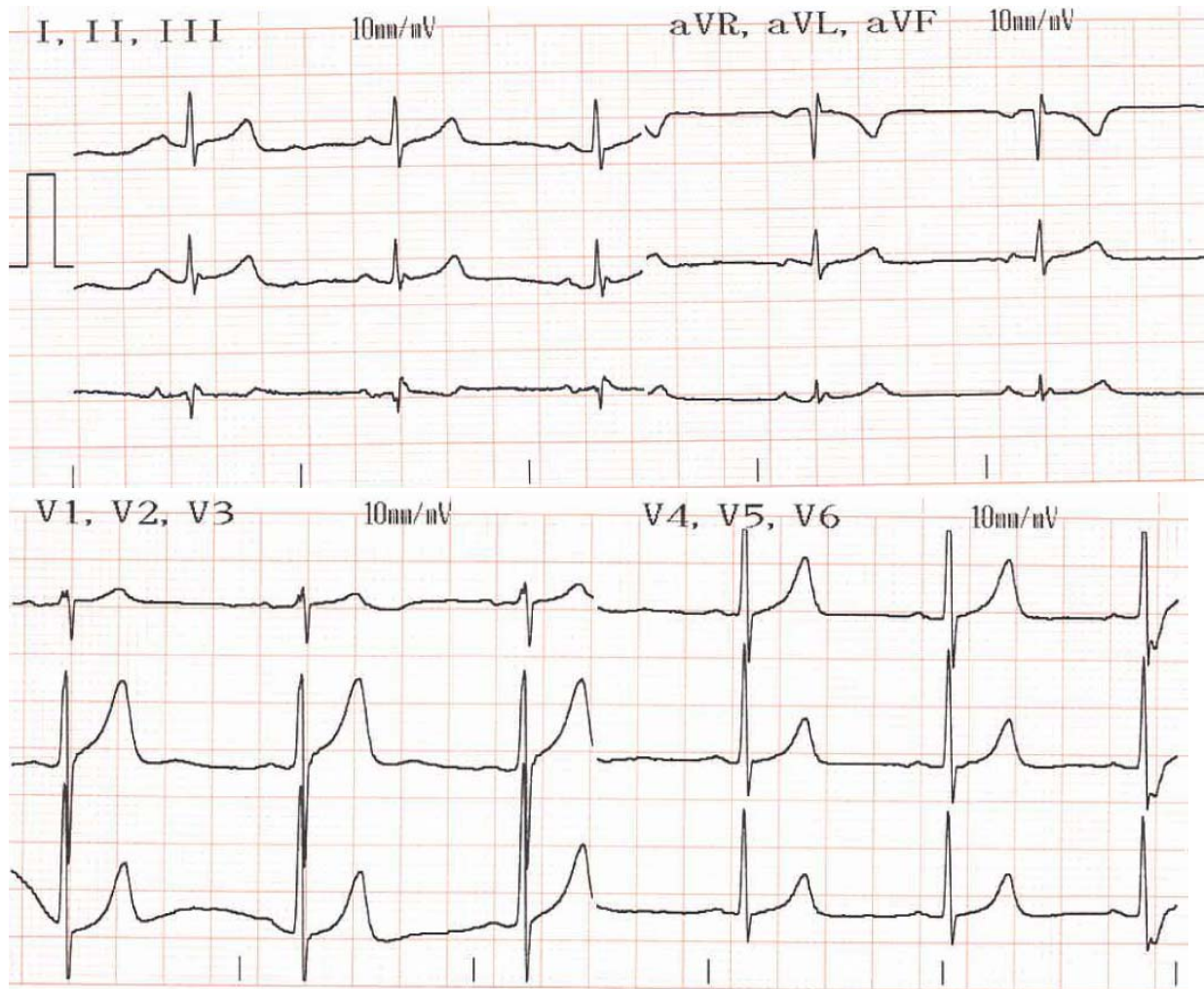
May 2009



HR = 68bpm; P duration = 104ms - P Axis = $+45^\circ$; PRi = 148ms; QRSd = 122ms -
QRS Axis = -40° ; QT/QTc = 378/402ms; T axis = $+20^\circ$

THIRD ECG

May 22, 2010



Andres,

I would greatly appreciate your counsel (and that of the other members of the arrhythmia/ECG distribution) with respect to the attached series of ECGs. In 2008, this young man (approx. 40 years old) had an incomplete RBBB. In 2009, he had a complete RBBB with a leftward axis. In 2010, the bundle branch block has resolved. The rates are never that fast to invoke a rate-dependent RBBB. His BP is normal, his physical exam is normal. He exercises on a regular basis. He is of small stature and thin. His ECG from 2010 is accompanied by his blood chemistry tests as well as a report of his chest x-ray and pulmonary function tests. He does not smoke.

My recommendation was to do nothing special but to just follow this on an annual basis unless symptoms (syncope, presyncope, dyspnea, etc) develop but I have not seen this pattern of initial worsening of an intraventricular conduction abnormality followed by a near normalization of the 12 lead ECG.

Thanks for your assistance.

Paul

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Sent: Friday, July 09, 2010 7:28 PM

To: Dr. Levine private

Subject: My ECG Report: Complete RBBB Pattern?

Patient account

Dear Dr. Levine,

How are you recently? As I told you in KL, my ECG showed RBBB pattern in past 2 years. I have attached the 2010 ECG with blood test result, as well as my ECG in 2009 and 2008.

In 2010, did my ECG still shows RBBB pattern, as I also see second R wave in V_1 ? Is it complete or incomplete?

Regarding to this ECG pattern, anything I need to note? I do exercise (treadmill 30-45min) everyday. Any reason for this ECG pattern?

My Total Cholesterol and LDL is higher than normal compared with reference for few years (without taking medicine), I will try to diet. Do I need to start medicine?

Regarding to other reports in 2010, anything else I need to pay attention?

Sorry to trouble you for my personal matter. It is not in urgent and so takes your time. I will in St. Paul again next week.

God bless you and your family!!

Patrick

First opinion: Prof Bernard Belhassen

I would like to suggest 3 possibilities:

1. Error in patient's name (the ECG of 2010 does not belong to the same patient shown in 2008 and 2009);
2. Intermittent RBBB
3. Severe bifascicular block including identical degrees of first degree block in both right and left bundle branch system and explaining the slight increase in PR interval in the 2010 ECG as compared to the 2009 ECG.

In any case: I would recommend simple recording of the His activity and atrial pacing

Prof. Dr. Bernard Belhassen

Second opinion Professor Vincent Probst

This is an interesting case demonstrating that AV block could be regressive at least temporarily. We have interesting data showing that even in patients implanted for complete AV block and permanently pace recovery of a normal conduction is not rare

Professeur Vincent Probst

Centre de référence pour la prise en charge des maladies rythmiques héréditaires et USIC,

l'institut du thorax, CHU de Nantes

02 40 16 57 00

06 15 40 84 13

bip 116

SURNAME: Probst

NAME: Vincent

INSTITUTION: From the L'Institut du thorax, Service de cardiologie, INSERM U533, Nantes, France.

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Visitez le site de l'institut du thorax à

<http://www.umar915.univ-nantes.fr>

POSTAL ADDRESS: L'Institut du thorax, Service de cardiologie, INSERM U533, Nantes, France.

Dear Andres,

Having at least 2-yr RBBB resolved spontaneously is encouraging. This friend of Dr. Levine has taken good care of himself and it works!

Best regards,

Li

Dear Paul

Thanks for sharing such interesting case with us.

Why did he consult in the first place? (Chest pain? Dizziness? Routine follow-up?)

Physical examination?

Exercise related chest pain?

My interpretation of the second ECG (2009) is not RBBB alone, but in combination with LSFB (if an Echo has completely ruled out other causes of PAF-predominant anterior forces). R-wave in V2 is > 15 mm. I would like to allow Potro (Andres) to teach us about LSFB, but I would certainly suspect it in the absence of other causes of PAF.

There is a beautiful paper from Andres's group on a transient ischemic-related LSFB. This is why I would like to know whether despite being a young man, he could have ischemia.

I would recommend a stress test to evaluate:

- 1. Ischemia**
- 2. Conduction disorder ischemia-related**
- 3. Conduction disorder rate-related (sometimes is about small variations in the heart rate to trigger phase 3 aberrancy)**

An Echo would be desirable too.

Best

AB

Dr. Paul Levine's answer to

Adrian Baranchuk and Andres,

This young man has absolutely no signs (unless it is the waxing and waning intraventricular conduction abnormality) or symptoms to suggest ischemic heart disease or any other heart disease. I have spent time with this individual. There are no physical limitations or any indication of a cardiac problem. His total cholesterol is elevated but he is without other risk factors for ischemic heart disease. In light of the early truly minor ECG changes, he started having annual physical exams. Then when the 2009 ECG showed CBBB with the left ward axis consistent with LSFB, annual follow-up became even more of an imperative. His most recent ECG showed resolution of the BBB. Hence, his inquiry to me and thus my inquiry to both of you and others. I, however, have not personally examined him.

Thanks for your consideration.

Paul

Dr. Baranchuk's reply:

I would feel more comfortable with a Stress Test. It may help to clarify this case, via rate-related changes or ischemia (silent) related. Coronary anomalies are not rare in young people.


For an extraordinary case, extraordinary management.

Best

AB

DR. ANDRÉS COMMENTARIES

Dr. Martin Ibarrola's observation: We think that the third ECG probably belongs to another person, because this one is 30 years old. I agree with him.



22/	5/10	11:28		
NAME:				
ID:	M	30~		
HR:		63	bpm	
R-R:		0.945	sec	
P-R:		0.141	sec	
QRS:		0.070	sec	
QT/QTc:		0.359/0.370		
AXIS QRS:		19	deg	
RV5/SV1:	1.24/	0.38		
R+S:		1.62	mV	
Notice:				

In 2010, our patient should have 41 years
Data collection mistake: precedence bias.

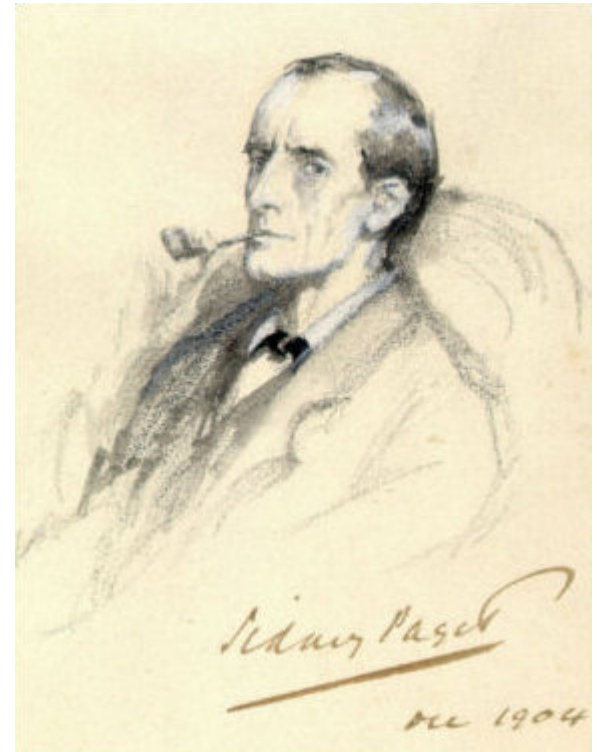
Bias definition: Any deviation of results or inferences from the truth, or processes leading to such deviation. Bias can result from several sources: one-sided or systematic variations in measurement from the true value (systematic error); flaws in study design; deviation of inferences, interpretations, or analyses based on flawed data or data collection; etc. There is no sense of prejudice or subjectivity implied in the assessment of bias under these conditions.

CONGRATULATIONS DR. MARTIN IBARROLA AND PROF. BELHASSEN!

You have a truly Sherlock Holmes spirit.

Prof. Belhassen commentary:

1. Error in patient's name (the ECG of 2010 does not belong to the same patient shown in 2008 and 2009);



Sherlock Holmes is a fictional detective created by Scottish author and physician Sir Arthur Conan Doyle. A brilliant London-based "consulting detective", Holmes is famous for his astute logical reasoning, his ability to take almost any disguise, and his forensic science skills to solve difficult cases.