Atrial Infarction?: A forgotten clinical electrocardiographic entity? - 2014

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A 67 year old man presented with a history of acute anterior myocardial infarction (AMI) 2 months ago that was treated with a stent in the left anterior descending coronary artery (LAD).
He was discharged from the hospital on aspirin, clopidogrel, enalapril, metoprolol and simvastatin. Five days after discharge he was readmitted with a new episode of precordial pain associated with profuse sweating and dyspnea. The admitting ECG showed new ST segment elevation in the anterior precordial leads.
The P waves in leads V2-3 had “plus-minus” biphasic pattern with a slow and deep negative terminal component likely due to the effects of increased LV end-diastolic pressure frequently seen in anterior wall AMI. In addition the PR segments were depressed reflecting the effects of atrial injury on atrial repolarization (Figures 1A and 1B). Due to the suspicion of new subacute stent thrombosis the patient was immediately sent to the cardiac catheterization lab where coronary angiography revealed a new LAD occlusion that was treated by balloon angioplasty. The post-procedure ECG revealed loss of R waves in leads V1-3, resolution of ST segment elevation, and deep negative T waves indicative of successful myocardial reperfusion. There was also disappearance of the atrial injury changes in the PR segments and loss of the deep negative terminal component of the P waves in V2 and V3 (Figure 2B).

Figura 1A

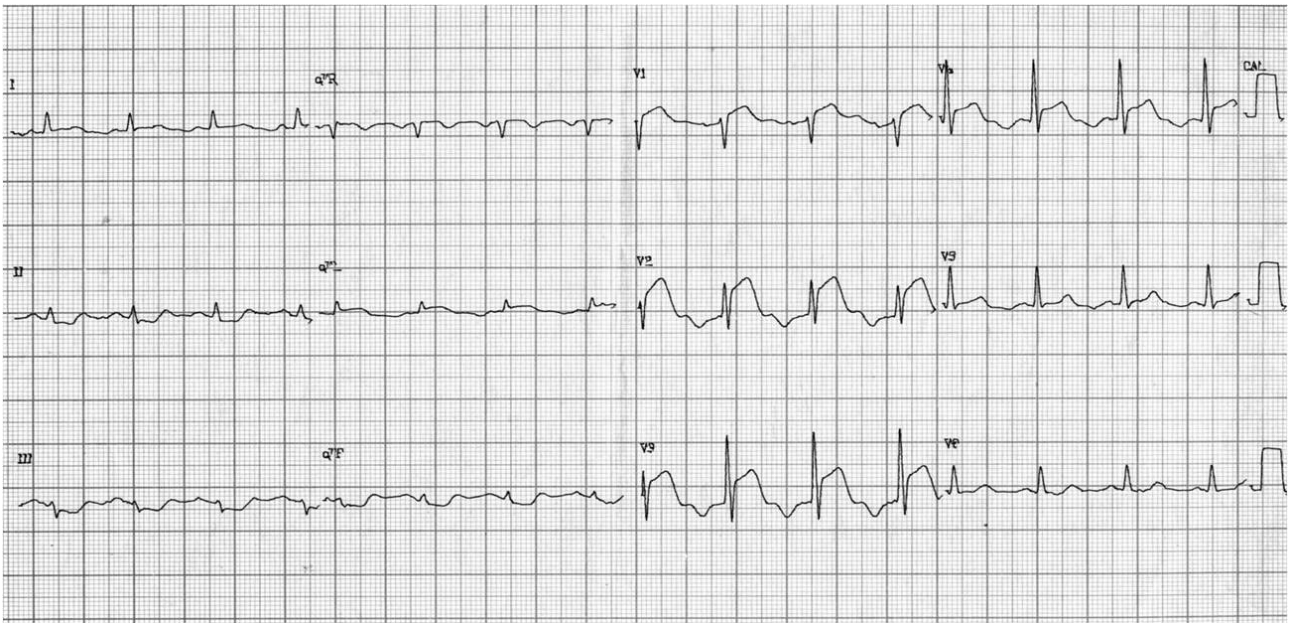
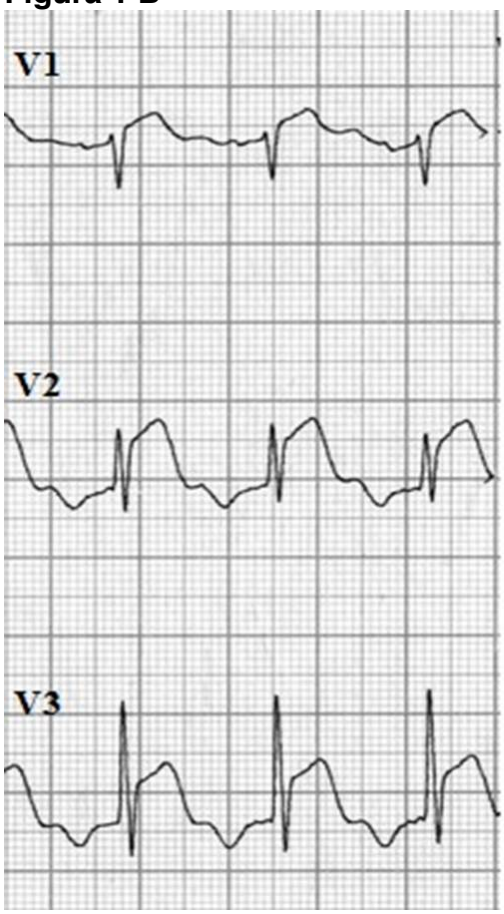


Figura 1 B



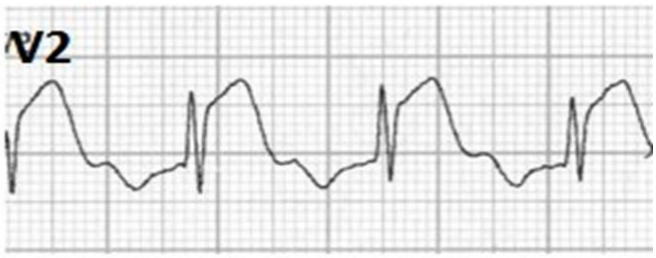
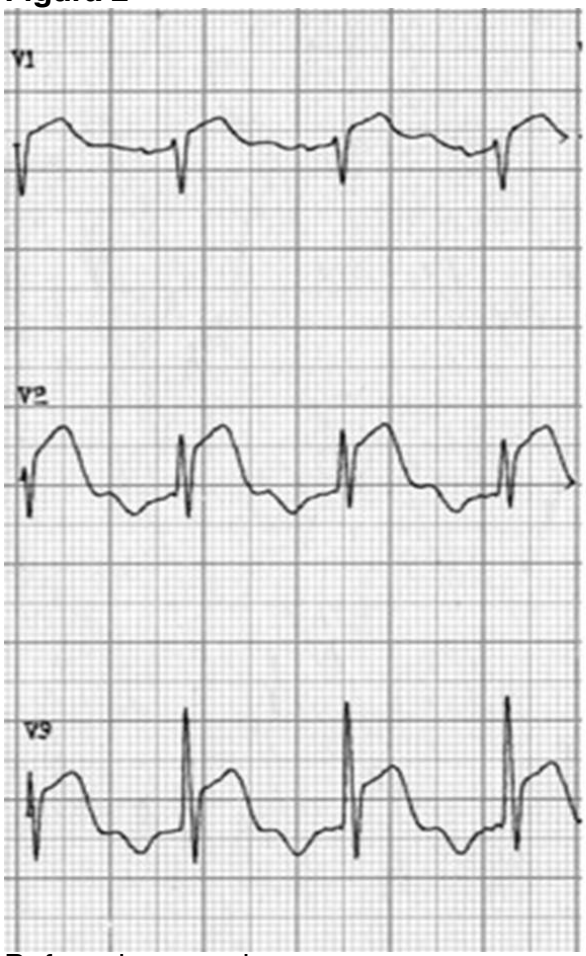
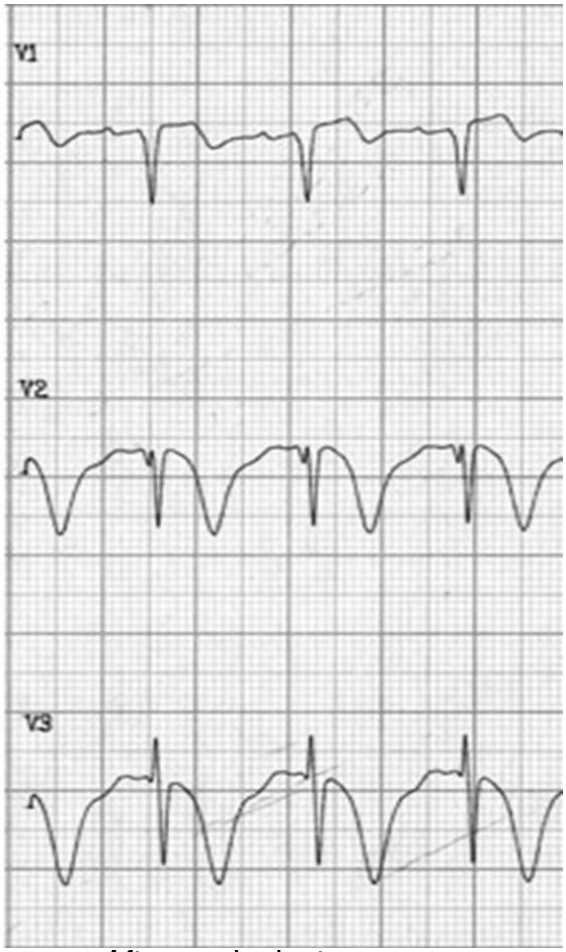


Figura 2



Before de procedure



After angioplasty

We are waiting for your valuable opinions and comments.
Good Sunday for all.
Raimundo Barbosa-Barros, Andrés Ricardo Pérez-Riera & FrankYanowitz

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COLLEAGUES´OPINIONS

Hola foristas,
En mi opinión creo que no se trata de una onda P. El PR mide 0.18seg, aproximadamente. Creo que se trata de una bonita onda "U" negativa relacionada con cardiopatía isquémica como suele comentar siempre el maestro Antonio Bayes de Luna.

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Estimado Andrés:
El PR en derivaciones de los miembros es de 170 mseg. Al medirlo en las derivaciones precordiales se encuentra oculto dentro de la onda U negativa gigante en las derivaciones más afectadas V2 a V5 con supradesnivel, evidencia de injuria miocárdica aguda, que involucra además a V1 y DI y AVL con leve supradesnivel del mismo y en DI y AVL se observa asimismo la onda U tardía que justamente se inscribe sobre la onda P, con componente negativo. y con infradesnivel del segmento ST en derivaciones inferiores, y leve supradesnivel del segmento ST en AVR, sugestivo de aumento de las presiones de fin de diástole del VI y lo que se corresponde con oclusión aguda proximal de la arteria descendente anterior.
Solo teniendo las derivaciones de los miembros e interpretando que se trata de una onda U gigante de injuria miocárdica que se inscribe sobre la onda P, no encuentro manera de evaluar signos de infarto que involucre a la aurícula.

Un abrazo

Martín Ibarrola