Runaway pacemaker events are a potentially lethal malfunction and in Spain they may be more frequent than thought as little is known of them and they often present intermittently.

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Painful Left Bundle-Branch Block

To the Editor:

During exercise stress testing, approximately 0.3% of patients develop transient ventricular conduction defects including left branch block (3 out of 4 cases) (LBBB). Of these, 70% occur in patients with documented baseline cardiomyopathy of different etiologies (ischemic heart disease, hypertensive or valvular cardiomyopathy, degenerative disturbances of the conduction system, etc). In patients with normal coronary arteries and without other underlying illness, the association of chest pain and transitory LBBB was first described in 1976 and is known as painful LBBB.

A 57 year-old man, with left nephrectomy for renal neoplasia, with no known cardiovascular risk factors or history of cardiomyopathy, was admitted to our hospital with symptoms of retrosternal pain irradiating to the epigastrium and accompanied by sweating, paleness and tachycardia (105
Letters to the Editor

tion with mechanoreceptor stimulation causing chest pain. 
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similar episode.

The pathophysiology of painful LBBB is unknown. Al-
though some authors have suggested it is caused by mi-
crovascular ischemia, basing themselves on finding of high
levels of lactate in the coronary sinus, the most widely ac-
cepted view today attributes it to a dysnergy of the contrac-
tion with mechanoreceptor stimulation causing chest pain.4 

The interest of this patient lies in our having been able to 
observ LBBB during episodes of such intense chest pain 
and accompanied by nausea and vomiting, at rest. The dis-
crete increase in heart rate during pain does not permit us to 
attribute the conduction disturbance to a frequency-depen-
dent mechanism. Almost all episodes of painful LBBB de-
scribed previously have been related to increased heart rate 
during exercise.13 In our patient, with angina at rest and an-

giographically normal coronary arteries without other car-
diac illness, a hypothesis of microvascular angina seems 
most plausible after discounting a heart rate dependent 
mechanism.

It is difficult to diagnose acute ischemia in patients with 
LBBB as many ECG diagnostic criteria are not applicable. 
Anomalous ventricular depolarization produces secondary 
alteration in the process of recovery, a phenomenon that ap-
pears in the ECG with changes in repolarization in a direc-
tion opposite to the principal QRS deflection or “appropriate 
discordance” between the QRS complex and ST-segment. 
Elevation of ST-segment in association with positive QRS 
complex, or ST-segment depression in V1, V2 or V3 leads 
do not occur in uncomplicated bundle branch block, known 
as “inappropriate discordance,” which is indicative of acute 
ischemia. Extreme ST-segment elevation (>5 mm) in V1, 
and V2 also indicate acute ischemia. Given the high mortali-
ty of myocardial infarction electrically hidden by LBBB, 
the norm should be to perform immediate cardiac catheteri-
ization.

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1132 Rev Esp Cardiol. 2005;58(9):1130-3