IMAGES **in PAEDIATRIC CARDIOLOGY**

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MeSH: pectus excavatum ; Brugada phenocopie

Brugada-type ECG associated with pectus excavatum

Introduction

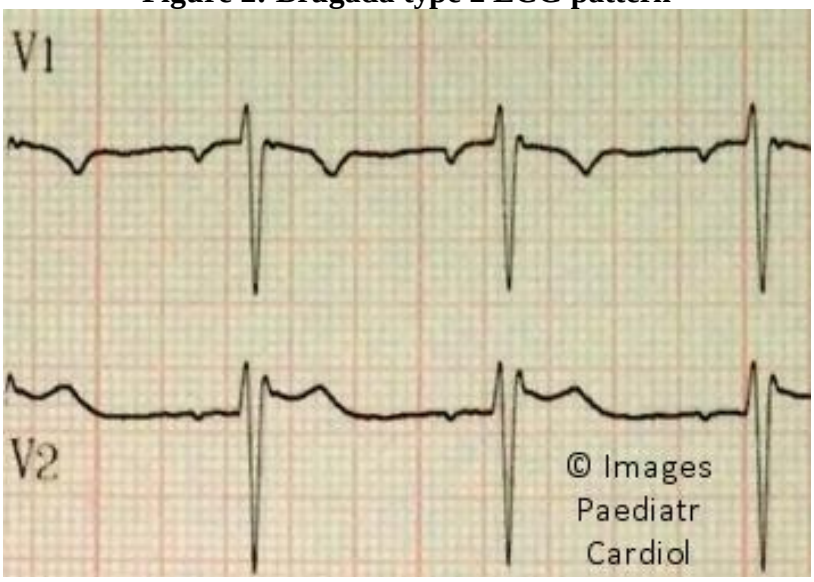
Brugada phenocopies (BrP) are new clinical entities characterized by an ECG pattern that is identical to type 1 or type 2 Brugada pattern, despite the absence of the true congenital Brugada syndrome (BrS).[1] BrP are caused by various factors such as mechanical mediastinal compression, myocardial ischemia, pulmonary embolism, pericardial diseases and metabolic conditions.[2] However, only few cases have been reported of patients with pectus excavatum and BrP. They have an ECG showing right bundle branch block, but also mild ST-segment elevation in the right precordial leads, mimicking the ECG patterns of type 2 Brugada syndrome.[3]

Case

A 13-year old adolescent with pectus excavatum of the thorax (Figure 1) was admitted to the emergency department with an electrocardiogram (ECG) on admission showing a Brugada type 2 pattern (Figure 2). The patient had no personal or familial history of Brugada syndrome, sudden cardiac death, cardiac arrest, or non-vagal syncope. Moreover, he was known to paediatricians for a history of tachycardia and had several ECGs before his adolescence, without ST-segment modification.

Figure 1: Pectus excavatum

Figure 2: Brugada type 2 ECG pattern



Discussion

This case illustrates with typical images a rare association of symptoms. We speculate that the Brugada-type ECG observed in our patient was probably caused by long-term mechanical injury to the right ventricular free wall, as a result of chronic compression by the pectus excavatum (as it appeared only after his adolescence).[4] Our patient was discharged from the emergency department without any evidence of true Brugada syndrome and a normal 24h Holter ECG recording. No additional investigation was done.

References

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