

(2), affected by aborted sudden death and a mild form of right ventricular cardiomyopathy (4), had the discussed ECG pattern. We demonstrated by electrophysiologic mapping that this ECG pattern is related to late depolarization of the outflow tract of the right ventricle (3). This observation was confirmed by a positive late potentials study on signal-averaged electrocardiography (5) and could constitute the basis for reentry.

Other similarities between the studies derive from the clinical history, as two of four patients and four in the series of Brugada and Brugada had some familial involvement.

The difference between the two reports is substantial, however, as we have described in detail structural cardiac abnormalities in this syndrome, whereas Brugada and Brugada believe that the disorder is functional. However, biopsy was performed in only half of their patients, autopsy was not performed in the patient who died and no quantitative details regarding echocardiography and angiography are given.

We believe that their report confirms that the problem of "cryptogenetic" or idiopathic ventricular arrhythmias (6) is still far from resolution, as there is no standard criterion to define what is normal. We hope that a closer international cooperation will be instituted to examine all these cases, propose an investigational protocol and define diagnostic criteria.

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#### References

- 1 Brugada P, Brugada J Right bundle branch block, persistent ST segment elevation and sudden cardiac death: a distinct clinical and electrocardiographic syndrome. *J Am Coll Cardiol* 1992;20:1391-6
- 2 Martini B, Nava A, Thiene G, et al Ventricular fibrillation without apparent heart disease: description of six cases. *Am Heart J* 1989;118:1203-9
- 3 Nava A, Canciani B, Schiavinato ML, Martini B, Buja GF La repolarisation précoce dans les précordiales droites: trouble de la conduction intraventriculaire droite? Corrélation de l'électrocardiographie-vectrocardiographie avec l'électrophysiologie. *Mises à jour cardiologiques* 1988;17:157-9
- 4 Thiene G, Nava A, Corrado D, Rossi L, Pennelli N Right ventricular cardiomyopathy and sudden death in young people. *N Engl J Med* 1988;318:129-33
- 5 Nava A, Canciani B, Martini B, et al El electrocardiograma y el vectrocardiograma en la displasia aritmogénica del ventrículo derecho. *Rev Latina Cardiol* 1992;13:275-83
- 6 Nava A, Thiene G, Canciani B, et al Clinical profile of concealed form of arrhythmogenic right ventricular cardiomyopathy presenting with apparently idiopathic ventricular arrhythmias. *Int J Cardiol* 1992;35:195-206

### Right Bundle Branch Block, Persistent ST Segment Elevation and Sudden Cardiac Death

The report of Brugada and Brugada (1) adds eight more cases to a clinical and electrocardiographic (ECG) syndrome previously described in detail by our group (2,3). Patients 1, 3 and 4 in our report