A 41-year-old man was referred for electrophysiological evaluation after recurrent syncope that occurred frequently during vigorous exercise. The patient had a complete, normal cardiological work up, including a resting ECG, an exercise stress test, and an echocardiogram. He reported that just before loss of consciousness, his heart was beating very fast. An electrophysiological study was performed (Figure), and typical atrioventricular nodal reentrant tachycardia was inducible, with a single atrial premature extrastimulus, after the infusion of 1 mg/h orciprenaline. With the induction of the tachycardia, heart rate increased from 91 beats/min (R-R interval, 660 ms) during sinus rhythm to 175 beats/min (R-R interval, 335 ms), blood pressure dropped from 120/80 mm Hg to 50/40 mm Hg, and mean right atrial pressure increased from 1 mm Hg to 18 mm Hg. Although the patient was in the supine position, he lost consciousness when tachycardia was induced. Successful catheter modification was performed, and the patient remained free of symptoms during a follow-up of 37 months.

Displayed are surface leads I, II, III, V1, and V6. In addition, the recordings from the high right atrium (HRA), the His bundle (HBE), and the right ventricular apex (RVA) are shown. Invasive recordings of blood pressure in the right femoral artery and the right atrium were obtained. A single paced premature atrial contraction (ES) induced a typical slow/fast atrioventricular nodal reentrant tachycardia. Almost instantaneously, arterial blood pressure dropped.
Syncope and Supraventricular Tachycardia
Volker Kühlkamp, Ralph Bosch and Christian Mewis

Circulation. 2001;104:e102
doi: 10.1161/hc4501.098015

Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2001 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circ.ahajournals.org/content/104/20/e102

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Circulation can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Circulation is online at:
http://circ.ahajournals.org//subscriptions/