Intermittent Atrial Parasystole

By Charles Fisch, M.D., and Robert B. Chevalier, M.D.

Atrial parasystole in itself is an extremely rare finding. An intermittent atrial parasystole in which the first beat of each run is a premature atrial systole with fixed coupling to the preceding sinoatrial beat has not been previously described and warrants reporting as an interesting electrocardiographic finding.1-4 This variant of parasystole may represent an intermediate form between ordinary coupled premature beats and parasystolic rhythm.

The diagnosis of atrial parasystole in our case is based on variable intervals between

---

**Figure 1**

This figure shows an intermittent atrial parasystole. The arrow-heads mark the parasystolic P waves.

Circulation, Volume XXII, December 1960 1149
the ectopic P waves and the preceding sinus beats in any one run, interference by the premature beat with initiation of the next sinoatrial beat, and the demonstration of a constant time interval between parasystolic P waves. Fusion (combination beats) are not readily apparent in these tracings because the configuration of the sinoatrial and ectopic P waves resembled each other very closely. The parasystolic rhythm is intermittent in character, and all runs of the ectopic rhythm begin with atrial premature systoles at a constant time interval after the preceding sinus beat. Only this initial ectopic beat shows fixed coupling; all the subsequent ectopic beats show variable coupling.

Case Report

The electrocardiogram described below is representative of a number of tracings obtained on different days on a 63-year-old man with severe heart failure, secondary to long-standing hypertensive heart disease. The drugs administered at the time the electrocardiogram was obtained included digitoxin, chlorothiazide, and supplemental potassium.

The strips reproduced in figure 1 form a continuous tracing. Strip A shows a normal sinus rhythm with a P-P interval of 0.50 second. The third P in strip B is premature, follows the preceding sinus beat by 0.50 second, and represents the first atrial wave of a parasystolic rhythm. The P-P interval of the parasystolic focus measures 2.23 to 2.30 seconds. The interval between the ectopic P and preceding sinoatrial beat increases gradually from 0.50 to 0.70 second and as this time approaches the P-P interval of the sinoatrial rhythm (0.72 second), it finds the atrium refractory and the ectopic rhythm is interrupted. In strip G the ectopic P wave reappears again coupled to the preceding sinus P wave, again by an interval of 0.50 second. The time from the last parasystolic P in strip F to the first ectopic beat in strip G is not a multiple of the established parasystolic P-P interval. It measures 15.12 rather than 13.8 or 16.10 seconds, the expected multiple of the established parasystolic interval of 2.30 seconds. The failure of the P wave in strip G to reappear when expected and the constant coupling of the first beat of each parasystolic run indicate that the discharge of the ectopic focus was intermittent or interrupted during this time. The intermittent nature of the parasystole with accurate coupling of the first beat of each cycle was present in over 30 cycles studied.

Summary

A case of atrial parasystole is reported. The parasystolic rhythm was intermittent in character and began each time with an atrial premature beat exhibiting a constant relation to the preceding sinus beat.

Summario in Interlingua

Es reportate un caso de parasystole atrial. Le rhytmo parasystolic esseva de character intermittente e comenciava invariavelmente con un prematur systole atrial, exhibienie un relation constante con le precedente pulso pulso sinusal.

References

Intermittent Atrial Parasystole
CHARLES FISCH and ROBERT B. CHEVALIER

Circulation. 1960;22:1149-1150
doi: 10.1161/01.CIR.22.6.1149
Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 1960 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/22/6/1149

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/