

LETTERS TO THE EDITOR

Particular Systolic Time Interval Profile Encountered in Patients With Atrial Septal Defect

Boudoulas et al. recently reported on respiratory variation in systolic and diastolic time intervals in atrial septal defect (1). As they stated, alterations in diastolic time intervals are most likely secondary to minimal changes in heart rate and to those occurring to the systolic time intervals, which are by far the most informative. In their introduction, they noted: "We postulated . . . that an atrial septal defect may significantly alter right heart-left heart temporal interrelationships." In fact, in relation to systolic time intervals several teams have already reported such alterations in atrial septal defect, first on the left side (2), under respiration (3), a finding that was later confirmed by Wanderman et al. (4). The right side was also explored in patients with atrial septal defect by Tsuda et al. (5). In 1984, our team proposed an approach to quantitate the atrial shunt using the so-called haemodynamic ratio related between both sides (6), since multifactorial statistic analysis had previously shown that it was the most discriminant variable between normal subjects and patients with atrial septal defect. The use of this ratio substantially improved the value of the correlation coefficient related to the magnitude of the shunt, and this method, although less accurate than that using direct Doppler flow measurement ratios, appeared to be an alternative procedure when the latter are not applicable. Finally, the report of Boudoulas et al. represents an original contribution to the study of diastolic time intervals, complementing previous interesting works of this team. In relation to systolic time intervals, it appears to be an elegant confirmation, based on simultaneous traces, of previous noninvasive studies rather than the resulting study of a fruitful "postulate."

COLETTE VEYRAT, MD
CNRS

25-29 rue Manin
75940 Paris Cedex 19, France

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Reply

We appreciate Veyrat's interest in our article and the comments made on systolic time intervals in patients with atrial septal defect. The work of our French colleagues is well known to us because of our interest in graphic techniques and systolic time intervals. Systolic time intervals were introduced in clinical practice by Weissler et al. (1,2) from the Ohio State University and right and left ventricular time intervals in humans with a pulmonary artery intracardiac manometer combined with an external carotid pulse tracing were demonstrated in patients with atrial septal defects in a study from our group (3).

Our purpose was not to duplicate many publications related to systolic time intervals and atrial septal defect, but to establish the normal respiratory left ventricular-right ventricular interrelations and to use these interrelations as a basis for comparison with findings, in patients with atrial septal defect or other disease states, or both. For these reasons, many publications, including our own related to systolic time intervals and atrial septal defect (3), were not included in bibliography.

HARISIOS BOUDOULAS, MD, FACC

Professor of Medicine
Division of Cardiology
Ohio State University
Columbus, Ohio 43210-1228

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Incidence and Management of Limb Ischemia With Percutaneous Wire-Guided Intraaortic Balloon Catheters

Alderman et al. (1) recently wrote concerning the incidence of management of leg ischemia following insertion of intraaortic balloon catheters.

We also have experienced obstruction of the catheter device of the iliac and femoral artery on the side of which the catheter was placed and have managed to recently keep the balloon pump catheter in place despite initial obstruction of the passageway sufficient to cause ischemia of the limb distally.

This technique is simply to withdraw the sheath catheter through which the balloon pump catheter was initially placed. One can visually inspect the sheath and balloon pump outside of the body and see that there is a small passageway that does exist between the shaft of the balloon catheter and the sheath introducer set itself.