Sudden Death in Infective Endocarditis

To the Editor:

In patients suffering from infective endocarditis, sudden death is not an uncommon occurrence. Recent reports have stressed that a full four-week to six-week course of antibiotic therapy need not be completed before valvular replacement is undertaken. Consequently, the identification of subjects who are at increased risk of sudden death takes on added importance. We report the clinical, serial echocardiographic, and necropsy findings in a patient with aortic valvular endocarditis in order to call attention to a complication which is not usually appreciated, namely, occlusion of the coronary ostia by valvular vegetations.

CASE REPORT

A 67-year-old woman was admitted on Oct 20, 1975, with infective endocarditis. She had previously been evaluated in May of 1975, after a physician heard murmurs of aortic stenosis and insufficiency on a routine physical examination. An echocardiogram revealed increased reflectance from the aortic leaflets (Fig 1A).

The patient was not seen again until her final admission, when she was acutely ill, febrile, and dyspneic. Raised purpuric lesions were noted over both ankles, and the patient was in moderate congestive failure. An electrocardiogram suggested an interim infarction of the anterior wall. An echocardiogram revealed an increase in aortic valvular reflectance suggestive of vegetations (Fig 1B), and imaging just superior to the valvular leaflets (Fig 1C) revealed a freely moving structure which traversed the aortic root during systole. Administration of gentamycin and penicillin and therapy for failure were begun. Two of the cultures of blood taken at admission grew Propionobacterium species. The course of the patient's illness stabilized; however, three weeks after admission, she died suddenly.

At postmortem examination a thickened, tricuspid aortic valve was found. Vegetations were present on all three cusps, with predominance on the left. In addition, the left cusp contained a gelatinous, dark-red, freely movable vegetation that projected 1.3 cm above the valve (Fig 2). On opening the aorta, this vegetation was inserted into and completely occluded the left coronary ostium. There was no evidence of coronary embolus, significant atherosclerosis, or other cause for sudden death.

DISCUSSION

Sudden death due to coronary ostial occlusion is a rarely reported complication of aortic valvular endocarditis; however, the incidence of this complication may be underestimated, particularly in patients with large vegetations. Coronary ostial occlusion was first demonstrated by Lamb in 1913. Since that time, only scattered reports have appeared; however, these reports mentioned no features by which patients at risk for this complication could be identified short of postmortem examination.

Dillon et al first demonstrated that valvular vegeta-
Vegetations of sufficient size could be demonstrated echocardiographically in our patient strongly suggested the presence of vegetations. In addition, supravalvular imaging suggested the presence of a large, highly mobile vegetation in the aortic root, and this finding was confirmed at necropsy.

The significance of echocardiographic demonstration of such a large and mobile vegetation remains to be proved by further investigation. Nevertheless, such findings in a patient with bacterial endocarditis should concern the physician and may, indeed, be a compelling indication for early surgical therapy.

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RESPIRATORY INTENSIVE CARE UNITS

To the Editor:

I am writing in regard to an editorial entitled "Who Should Supervise Respiratory Intensive Care Units?" by Zwillich and Petty (Chest 70:323-325, 1976). Also, I am writing to comment on two articles1,2 which prompted the editorial because I believe that the series of exchanges between the authors of these articles may be detrimental to the further development of rapport between specialties meeting at the bedside of critically ill patients.

First, the report by Zwillich et al3 is a good review by a well-known group whose extensive experience and interest in this area qualify them to comment on the complications of assisted ventilation. Their report serves to remind us all that well-recognized and sometimes avoidable complications may occur in the best of circumstances. This article was then abstracted and commented upon in another journal.2 The commentary by Coppel2 accompanying the abstract raised a number of delicate and disturbing issues. Hidden among the truths of Coppel's commentary are statements sufficient to bother even the most unbiased reader, because some are poorly documented and some are delivered in an inappropriately abrasive manner. As Coppel states, the 10 percent incidence of endobronchial intubation missed by physical examination and noticed only after a chest x-ray film is alarming, even though, as Zwillich and Petty point out, the incidence of this complication under similar circumstances elsewhere is lacking. It is also true that nasal necrosis is a horrible complication of prolonged nasotracheal intubation in patients surviving episodes of assisted mechanical ventilation. On the other hand, nasal necrosis is relatively minor if the patient had a deformity of the jaw or facial trauma precluding any other route for a necessary rapid intubation.

As one who trained in an excellent Canadian intensive

REFERENCES

1 Lamb A: A case of occlusion of the left coronary artery by a pedunculated vegetation of the aortic valve. NY Pathol Soc 13:15-18, 1913

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