

objective of a surveillance system is not realized, its discontinuation may be justified.

Decisions on the appropriateness of antimicrobial regimens for suspected sepsis in neonates in an intensive care environment must surely be based on the consideration of many factors (eg, underlying illness, length of hospitalization, the anatomic location of prior or concurrent infection). The prevalence of antibiotic-resistant enteric bacilli colonizing infants seemed to us to represent an additional potential data base to help physicians in selecting an appropriate antibiotic regimen. In fact, we conclude that our surveillance proved unhelpful in this regard.

The seven infants infected with enteric bacilli resistant to gentamicin and ampicillin were offered alternative agents, including amikacin. Whether amikacin should have been included as one of the antibiotics given to all infants with suspected sepsis was much debated during the study period described in our article. For almost all of the study period, usage of amikacin was restricted through hospital policy and was available only in consultation with authorized personnel. (Colonization with gentamicin-resistant enteric bacilli was detected in 33 of 34 study months).

The statistic ($P = .61$) was calculated using Fisher's exact test, two tailed; we could not predict whether sepsis due to resistant organisms should have a higher or lower mortality, therefore, a two-tailed test was required. If a one-tailed test is used, the probability is 0.3.

Weber and Marks conclude their letter indicating that their own experience with surveillance systems has been more helpful. This is indeed encouraging, and we look forward to reading details of their findings—perhaps in a future volume of this journal!

ROBERT WHITE, MD
Newborn ICU
Memorial Hospital
615 N Michigan Street
South Bend, IN 46601

TIMOTHY R. TOWNSEND, MD
E. RICHARD MOXON, MD
Department of Pediatrics
The Johns Hopkins University
601 N Wolfe Street
Baltimore, MD 21205

Echocardiography in *Aspergillus* Endocarditis

To the Editor.—

In an extensive review¹ of endocarditis caused by *Aspergillus* in children, Barst et al found no cases in which the presence of vegetations was proven by echocardiography. We present the case report of a child in whom the two-dimensional echocardiogram first established the presence of a mycotic aneurysm and associated intracardiac and intra-aortic vegetations.

Case Report. An 11-year-old girl with severe congenital aortic stenosis underwent aortic valvulotomy on Dec 17, 1977. Fever developed on the 11th day after surgery and daily spikes to 38.8 C (102 F) continued for the ensuing several weeks. A tender, indurated erythematous lesion appeared on the dorsum of the left foot during the fourth hospital week. Blood cultures drawn on the 11th postoperative day and repeated throughout the course of fever, were sterile. There was no change in the cardiac murmur. Intravenous nafcillin (150 mg/kg/day) and gentamicin (7.5 mg/kg/day) were started during the fourth postoperative week for treatment of culture-negative bacterial endocarditis. One week later pulsations became nonpalpable in the left femoral artery and bilateral femoral arterial occlusions were confirmed by Doppler. M-Mode echocardiography was normal on the 45th postoperative day. M-Mode echocardiography repeated on the 68th hospital day showed a large echo-dense mass anterior to the aortic root. Two-dimensional echocardiography demonstrated a large, fluid-filled mass anterior to the aortic root (Figure). The mass contained echo-dense material and was consistent with an aneurysm of the anterior aortic wall containing either a thrombus or vegetation. There was similar echo-dense material within the left ventricle. Cineangiography later confirmed the presence of a large aneurysm of the ascending aorta. On the 75th day after surgery mediastinal exploration revealed pseudoaneurysm formation of the anterior wall of the ascending aorta. The intima of the ascending aorta was covered with friable vegetations to the level of the innominate artery. Several large vegetations were found within the left ventricle. All of the vegetations, including thrombi removed from both femoral arteries during cannulation, grew *Aspergillus fumigatus*. A Dacron aortic prosthesis was placed and amphotericin B therapy (1 mg/kg/day) was started and continued through the time of death. The patient died on the 82nd day after valvulotomy. The immediate cause of death was multiple cerebral mycotic aneurysms with intracerebral hemorrhage, thrombosis,

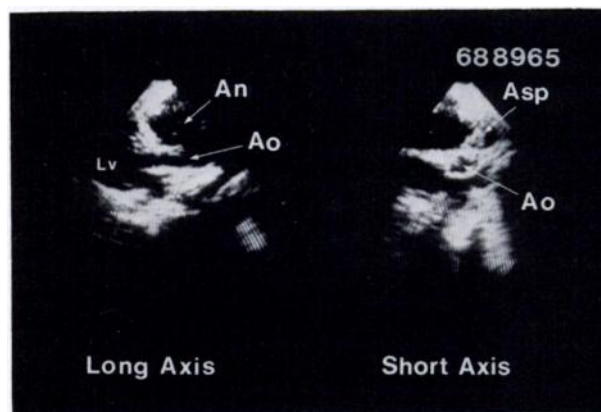


Figure. Long axis image of ascending aorta (left). Large fluid-filled space consistent with a mycotic aneurysm appears anterior to anterior aortic wall. Short axis image of aortic root (right). Fluid-filled space (mycotic aneurysm) contains echo-dense material histologically confirmed to be vegetation. Right ventricular outflow tract was anterior to lesion on other sectoral planes. Lv, Left ventricle; Ao, aorta; An, aneurysm; Asp, vegetation.

and subfascial herniation. Postmortem cultures of aortic vegetations on the proximal and distal anastomosis sites grew *A fumigatus*.

MARTIN B. KLEIMAN, MD
Department of Pediatrics
Indiana University
Indianapolis, IN 46223

REFERENCE

1. Barst RJ, Prince AS, Neu HC: *Aspergillus* endocarditis in children: Case report and review of the literature. *Pediatrics* 68:73, 1981

In Reply.—

This case report is very encouraging in demonstrating that with recent advancements in echocardiographic technology and clinical perseverance, infective endocarditis (including *Aspergillus* endocarditis) can be diagnosed by noninvasive techniques. Echocardiography has been helpful in the diagnosis of infective endocarditis (Dillon T, et al: Management of infective endocarditis

using echocardiography. *J Pediatr* 96:552, 1980), although no previous cases of *Aspergillus* endocarditis diagnosed by echocardiography have been reported. We are hopeful that with continued improvement in M-mode and two-dimensional echocardiographic technology that the necessity for angiocardigraphic documentation of suspected vegetations will be eliminated. There is a significant risk of embolization associated with cardiac catheterization and angiocardigraphy in a patient with vegetations. We suggest that if the diagnosis of infective endocarditis necessitating surgery (ie, *Aspergillus* endocarditis) is made clinically and echocardiographically, the patient should undergo operation without prior invasive cardiac catheterization.

ROBYN J. BARST, MD
ALICE S. PRINCE, MD
HAROLD C. NEU, MD
College of Physicians & Surgeons
Columbia University
630 West 168th Street
New York, NY 10032

PLANNING

Crash programs fail because they are based on the theory that, with nine women pregnant, you can get a baby a month.

—Werner von Braun

Submitted by John T. McCarthy, MD.