

# Infant Deaths Linked to Odd Heartbeat

Few medical tragedies compare with sudden infant death syndrome, or SIDS, in which a baby dies from no apparent cause.

Now, researchers in Italy have found a surprising correlation between SIDS and a particular type of unusual heartbeat. Infants with this abnormality face a 41-fold greater risk of SIDS in their first year than those with normal heartbeats, the scientists report in the June 11 *NEW ENGLAND JOURNAL OF MEDICINE*.

"I would make a conservative estimate that at least one-third of SIDS cases are related to [the abnormal heartbeat]," says study coauthor Peter John Schwartz of the University of Pavia. The finding could pave the way for electrocardiogram (EKG) screening of some newborns and will probably lead to closer monitoring of infants found to have the abnormality.

The results also provide a basis for preventive drug treatment for newborns found to be at high risk, Schwartz says. In addition, the work may lead to genetic testing of newborns and their parents in families that have a history of either SIDS or the unusual heartbeat.

Between 1976 and 1994, researchers in seven Italian cities took EKGs of 33,034 infants at age 3 or 4 days. Of these infants, 34 died in their first year, 24 inexplicably. The researchers measured the space between two points, Q and T, on the EKG. Adults with a long interval between those points, or long QT syndrome, sometimes suffer irregular heartbeats; some of them die without warning.

Twelve of the 24 SIDS victims in the Italian study had a long QT interval—defined as greater than 440 milliseconds (msec). This condition indicates that muscle cells in the heart, which is paced by electric signals, aren't recharging fully with each beat to maintain an even pace. The 24 SIDS babies averaged a QT interval of 435 msec, compared to 400 msec for 9,725 babies selected at random from those that survived.

A long QT interval was by no means a death sentence. Only 1.5 percent of children with such an interval died of SIDS. In contrast, far fewer children with normal EKGs—0.037 percent—died inexplicably.

"This is a highly valuable study," says G. Michael Vincent, a cardiologist at LDS Hospital in Salt Lake City. A long QT interval may directly increase a baby's chances of SIDS or may be a marker of some other lethal problem, he says.

As early as 1976, Schwartz suggested that irregularities in the autonomic nervous system could trigger SIDS, and he began the recently published study to

test that hypothesis. The autonomic system regulates involuntary functions of the body, including heartbeat and breathing.

Meanwhile, research by Vincent and others has established that long QT syndrome has a genetic basis (SN: 7/26/97, p. 55). Mutations of several genes encoding the proteins that regulate electric charges in the heart have been linked to a long QT interval.

The Italian results "obligate all physicians in perinatal work to take better histories of the families," says Richard S. Crampton, a cardiologist at the University of Virginia in Charlottesville.

An EKG typically costs \$50 to \$90. If a less costly, computerized EKG that could accurately determine QT intervals were developed, Vincent says, "I could see

that being used as a routine screening, maybe in every baby."

Infants diagnosed with long QT intervals should be given beta blockers, the same preventive treatment used for children and adults with long QT syndrome, Schwartz says. The drugs, however, can have serious side effects.

"To think of a large population of babies being treated with beta blockers gives me reason for concern," says pediatrician Ronald L. Ariagno of Stanford University School of Medicine. He worries that there have been no large-scale, long-term studies of these drugs in infants. However, Richard A. Friedman, a pediatric cardiologist at Baylor College of Medicine in Houston, notes that babies often tolerate beta blockers better than adults do. —N. Seppa

## New bird species found in surprising place

Ornithologists have discovered a new bird, a sizable one, not in some isolated valley but along the backbone of the Ecuadorean Andes.

"Nobody would have thought to look here," says Robert S. Ridgely of the Academy of Natural Sciences in Philadelphia. Conventional wisdom places ornithology's final frontiers in little pockets of oddball habitats, such as hidden valleys or stray spurs of mountain ridges, not in forests connected to other vast forests.

The gnarled cloud forest near Podocarpus National Park may seem unlikely to science, but the long-legged featherball of a bird, a kind of antpitta, does quite well there. Ridgely and his colleagues first glimpsed it on a routine survey of birds last November. The researchers announced the find June 11 but are still preparing a formal description.

The scientists first noticed the bird's call, peculiar little hoots, half a mile away. Ridgely wasn't too excited, because many familiar species have unfamiliar dialects.

Ridgely recorded the sound and played it back to lure the mysterious hooter. "It's really quite an amazing call," he says, mimicking a long series of hollow, single notes interspersed with increasing pauses. "It almost sounds like it's getting out of breath," Ridgely notes. "Occasionally, it gives a slight hiccup."

Ornithologist Robert E. Bleiweiss of the University of Wisconsin-Madison points out that new birds "dribble in at a few a year." However, "not many are as distinctive as this one."

Debating what deserves to be called a species has provided a lot of sport for ornithologists, but "this bird will pass anybody's muster," says Michael Braun of the Smithsonian Institution in Washington, D.C.

It has the plump, almost tail-less body characteristic of antpittas, or "eggs on legs," as Braun calls them. "A lot of them are just little brown streaky jobs with spots." The new one, however, looms almost 9 inches long, with bold white markings on a dark head.

The bird may still be eluding scientists elsewhere. "We're overjoyed for [Ridgely], and we're kicking ourselves in the pants for not having found it in Peru," Braun says.

If any bird could evade scientists for so long, it's an antpitta, says John W. Fitzpatrick, director of Cornell University's Laboratory of Ornithology. "If it's not calling, you don't know it's there," he says. —S. Milius

*A new bird species that has been lurking in the underbrush near scientists for years.*

