

Ancient burial emerges in Honduran cave

Four young men exploring a cave in northeastern Honduras last April reached a 30-foot-high dirt wall near the end of a passageway. Upon scaling the obstruction with a ladder, they discovered piles of human skulls and other bones scattered across a patch of level earth.

A team of archaeologists, who soon learned of the striking discovery through Honduran officials, announced last week that the site is an approximately 2,000-year-old cave burial of between 100 and 200 people. Only a few such burials have been found for ancient cultures of Mesoamerica, an area that covered much of Mexico and Central America, and scientific descriptions of them have been scanty, says James E. Brady of George Washington University in Washington, D.C., director of the Honduran project.

"This find should give some much-needed prominence to cave archaeology

and encourage the exploration of other caves that may contain similar burials," Brady asserts.

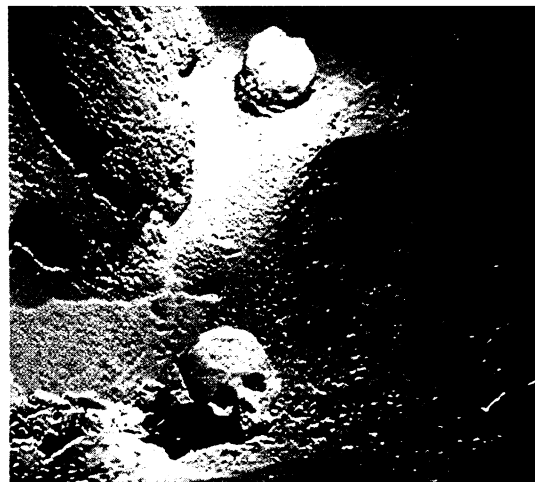
Brady's team conducted 2 weeks of fieldwork in the cave, known as the Cave of the River Tagua, during September. The wall that abuts the burial stands about one-quarter mile from the cave's entrance.

Investigators found limb bones stacked in piles, a sign that the cave served as a secondary burial site. Bodies were first interred elsewhere until the flesh decayed, then taken to the cave for permanent burial, Brady contends.

He suspects that the bones belonged to members of royal or high-ranking families in either the Lanka or Peche cultures that bordered the ancient Maya civilization. Undecorated ceramic bowls and two marble vessels found among the bones apparently served as offerings for specific individuals buried there, Brady holds.

Preliminary analysis of ceramic styles suggests that the burials took place between 300 B.C. and A.D. 500. Brady plans to lead an archaeological team back to the Honduran cave next summer to gather bone and charcoal samples for radiocarbon dating.

He also hopes to conduct DNA studies



of the bones to establish whether the burial contained deceased individuals from certain households or kin groups. If it does, other caves in the vicinity may hold burials of other elite families from the same period, Brady notes.

Evidence of cave burials now exists at scattered locations throughout Mesoamerica, but archaeologists have often neglected cave explorations in favor of surface excavations, according to Brady. He has already directed work at a massive cave burial in Copán, a Maya city in Honduras that flourished around 1,300 years ago.

"Mesoamerican cave burials may be more common than previously thought," Brady says. — B. Bower



Brady
Entrance to Honduran cave (left) that houses ancient burial site (top right).

Low TSH: An early warning for stroke

Like the drummer in a rock band, the thyroid gland helps set the pace for the body's rhythms. It does this by releasing two hormones that play an important role in regulating heartbeat, body temperature, the rate at which the body burns calories, and more.

An overactive thyroid can speed up all these functions to potentially dangerous levels, including making the heart's upper chambers beat rapidly and irregularly. For people with this abnormal heart rhythm, called atrial fibrillation, the risk of stroke is five times that for people with a normal heart rhythm.

Now, a new study shows that low concentrations of thyrotropin, the thyroid-stimulating hormone known as TSH, may serve as a marker for future atrial fibrillation in people over age 60.

"Because atrial fibrillation is an independent risk factor for stroke and can decrease cardiac output, it is important to identify any factors that predispose patients to have this condition," says Clark T. Sawin, an endocrinologist at Boston's Veterans Affairs Medical Center and a principal researcher in the study. He and his colleagues report their results in the Nov. 10 *NEW ENGLAND JOURNAL OF MEDICINE*.

The pituitary gland releases TSH in response to the thyroid hormones it senses in the blood. A high TSH concentration indicates an underactive thyroid that isn't secreting enough hormone; a low concentration warns of an overactive thyroid making too much.

Most physicians do not test for TSH unless a patient shows overt symptoms of thyroid problems, such as an enlarged thyroid gland. Also, physicians may attribute other symptoms that could be related to an overactive thyroid — fatigue, muscle weakness, weight loss, irritability, and insomnia — to normal aging and therefore do not call for TSH tests, Sawin notes.

The new study, conducted over 10 years, may change that approach. It followed 2,007 participants in the Framingham Heart Study, which has tracked cardiovascular disease among residents of that Massachusetts community for more than 40 years.

The researchers studied people age 60 and over who had never experienced atrial fibrillation. They divided the participants into four categories, based on their initial concentration of TSH: low, slightly low, normal, or high.

The results showed that those with low TSH were three times more likely to

develop atrial fibrillation over the next 10 years than those with normal TSH. For those in the slightly low and high TSH groups, the likelihood did not differ significantly from that of people with normal TSH. The researchers adjusted the data for age, sex, and other known risk factors, such as smoking, diabetes, and hypertension.

Lawrence C. Wood, medical director of the Thyroid Foundation of America in Boston, says the study's findings support the foundation's recommendation that everyone should have TSH tested by age 60. "Women should be tested by age 50, since they have a higher incidence of thyroid problems," he adds.

"Those with low TSH but no outward symptoms usually associated with hyperthyroidism [an overactive thyroid] should be carefully followed," says Sawin, "since the data show that low TSH concentration is an independent risk factor for atrial fibrillation."

Physicians estimate that about 35 percent of people with atrial fibrillation suffer strokes. A number of clinical studies have shown that those at risk of a stroke because of this heart condition might reduce that danger sharply by taking a daily aspirin or an anticlotting drug known as warfarin (SN: 3/24/90, p.180). — A.C. Brooks