

MEDICINE

Respiration Study Needed

Medical schools often neglect the need for teaching students the techniques of artificial respiration, resulting in ignorance which can cause death.

► **SOME PATIENTS** are dying unnecessarily because their doctors do not know how to restore their breathing or keep their airways open, a University of California anesthesiologist warned.

The reason goes back to medical school, which does not demand that students take a course in anesthesiology to learn the indications, techniques and necessity for providing an airway and ventilation for a patient who needs them, Dr. Robert H. Smith of the University's School of Medicine reported in *Medical Times*, August 1965.

Two general practitioners, although specialists in the manual forms of artificial respiration, were responsible for the death of an 18-year-old football player whose nose had been "smeared." They used tetracaine-soaked pledgets in the smashed bony ledges within the nose to provide local anesthesia.

When the rapid absorption of the anesthetic produced vascular collapse that progressed to cardiac arrest, Dr. Smith explained "these two MDs realized there was no point in opening the chest unless there were some way to ventilate the patient. They did not know how to ventilate him, so they called the fire department. The firemen arrived with their pulmator in 10 minutes; the patient had been beyond recall for at least eight of those minutes."

Most doctors have the mistaken belief that a patient can stop breathing four minutes and still be saved, Dr. Smith pointed out.

"The four minutes is a nice easy number to remember," says Dr. Smith, "and it is always remembered. It is too bad it is not true in most cases."

Many patients whose hearts stop beating and whose breathing is shut off have already been deteriorating for relatively long periods. When they go into cardiac arrest they have no reserve. If they are given adequate ventilation and oxygen, with closed-chest massage, their hearts may be brought back to normal after several minutes, but their brains cannot.

Mouth-to-mouth respiration has the advantage of immediately available equipment, Dr. Smith says, but it can only supply 15% to 16% oxygen. The danger of infection should not be overlooked, and most adults are incapable of ventilating an adult by this method for any significant time. Every physician should know how to perform mouth-to-mouth resuscitation but it should be only one of many tools.

There is the trick of grabbing the tongue with a cloth and pulling it out of the mouth to its full length, which every physician should know, along with other procedures such as turning the patient

prone, pulling out his tongue, letting his nose rest on his own wrist and the mouth hang free.

No physician should try to use mechanical ventilators without learning how to operate them. Dr. Smith found a third-year medical student using a mask upside down and pushing down on it so the person could not possibly breathe.

One of the techniques taught to medical students at the University of California makes particular use of the ribs. The patient's ribs are pulled upward while he lies with his face up. This is the supine position as opposed to the prone position.

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Germfree Products

GERM-FREE HANDS—A technician picks up a mouse in an isolator at the Germfree Bioscience Laboratories, St. Petersburg, Fla. By inserting their hands in these gloves from outside the isolator, technicians can check the animals without exposing them to germs.

MEDICINE

Virus, Appendicitis Linked

► **HIDDEN VIRUS** infection plays an important part in triggering appendicitis.

Adenovirus-7, which causes acute respiratory disease, and Coxsackie-B virus, whose type five causes aseptic meningitis, were clearly seen in fluorescent light microscopic examinations of removed appendixes studied in Kyoto, Japan.

Reporting in *The Lancet*, 1:1343, 1965, Dr. Takayoshi Tobe, chief, surgical department, Japan Baptist Hospital, said that "quite possibly the appendix, with its abundance of lymphoid tissue, can not escape virus infection."

During the past five years 642 appendixes have been studied microscopically after removal at the hospital. With fluorescent-antibody technique, Coxsackie-B virus and adenovirus were found in cells adjacent to the covering of the mucous membrane of the appendix as well as in the lymph follicles of this wormlike organ.

During the past 10 years the symptoms and signs of acute appendicitis have changed significantly, Dr. Tobe said. The number of cases of acute suppurative appendicitis is decreasing but mild appendicitis is increasing.

An abnormal number of lymphoid-containing cells, a condition known as lymphoid hyperplasia, was found in 91% or 474 infected appendixes, and many blood samples of patients before appendectomy showed indications of virus.

An emergency appendectomy was requested by the pediatrician of a five-year-old girl admitted for treatment of aseptic meningitis, because she had developed abdominal pain and had shown an increase of white blood cells on the second day after admission.

A microscopic study of the swollen appendix showed definite presence of the Coxsackie-B5 virus adjacent to the organ.

An infant who died 12 days after its birth from a virus ailment called cytomegalic inclusion disease was found to have gangrenous changes in the appendix. In another patient with measles, viruses also were found in the appendix.

"These findings indicate that acute viral appendicitis does occur," Dr. Tobe concluded.

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IMMUNOLOGY

New Vaccine Successful Against Cattle Disease

► **SCIENTISTS** in Stillwater, Okla., have developed what they believe is the world's first successful vaccine against anaplasmosis, a dreaded cattle blood disease.

The new vaccine is reported to greatly reduce death, weight loss and other damaging symptoms of anaplasmosis, which is rated the fourth most costly cattle disease in the United States.

The vaccine, which will be available this fall, does not always prevent the animal from getting the disease, but it greatly reduces its severity. The vaccine is known to protect an animal for at least a year.

The new vaccine was developed by scientists at the Oklahoma Agricultural Experiment Station, Oklahoma State University. Researchers have been concentrating on the problem at the station since 1928.

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