Medical Sciences Notes

TOOTH DECAY

Tooth Troubles Begin in Cradle

Severe tooth decay in both British and American children have been traced to prolonged bottle-feeding.

When a child falls asleep with his bottle still in his mouth, his teeth are exposed for prolonged periods to "fermentable carbohydrates" caused by sweetened milk, orange juice or water in his bedtime feeding.

Dr. Solomon N. Rosenstein of Columbia University says in the March issue of DENTAL ABSTRACTS that his study involved 140 boys and girls from one and a half to seven years old, all of whom had great amounts of decay. The British study, carried in the same publication, was almost identical.

Dr. Rosenstein found that the teeth most affected by decay were the upper incisors, followed by the first molars. The lower front teeth in bottle-feeders are protected somewhat by the tongue as it is extended to hold the bottle.

Dr. Rosenstein said that many of the older children in the group with widespread decay had an early history of prolonged use of bedtime bottles. When they were weaned they became habitual, almost continual, eaters of carbohydrate snacks.

ALLERGIC REACTIONS

Pigeons Studied for Allergy Effects

Those pesky pigeons that litter city parks with their droppings and feathers in complete disregard of civic virtue are causing lung inflammation, fever and chills in addition to even more disabling conditions.

To find out exactly what foreign material, or antigen, is making hypersensitive people react as they do, scientists at Marquette University, Milwaukee, Wis., will study pigeon blood and excreta as well as the human body's reaction to the substance.

Dr. Joseph J. Barboriak, assistant professor of pharmacology at the university, will direct the research under a new grant from the National Institute of Allergy and Infectious Diseases, Bethesda, Md.

MEDICAL TECHNOLOGY

Manikin Trains Anesthesiologists

A likelife manikin for training resident physicians in anesthesiology has been demonstrated for the first time at the University of Southern California's School of Medicine.

Such particular skill as passing a semirigid tube into the windpipe can be practiced so that when actual patients lie unconscious on the operating table, the delicate membranes covering the vocal cords will not be injured.

The patient-simulator, called Sim One, was developed by USC medical researchers working with engineers of Aerojet-General Corporation's Von Karman Center in Azusa, Calif., under a $272,130 grant from the U. S. Office of Education.

Sim One has a heartbeat, pulse beats and other functions that simulate human blood pressure, breathing and reactions to drugs. It is computer-programmed with electronic systems driving mechanical actions such as opening and closing of eyes, vomiting or even heart arrest. Manual controls allow the anesthesiologist to face such emergencies as an attempt to cough the tube out of the throat while anesthetic gases are being administered directly to the lungs.

PERIODONTIA

Factor in Gums Destroys Bone

A first step in preventing destruction of the bone around teeth has been taken in the development of a test-tube model system that simulates the production of the most prevalent dental disease in adults, a Harvard professor of periodontology reported in Washington, D.C.

Experiments have shown that the human gums possess an unidentified factor that stimulates bone destruction, Dr. Paul Goldhaber told the 45th annual meeting of the International Association of Dental Research. Further studies are continuing in his laboratories in the hope of discovering the identity of the unknown factor.

What the researchers did was to obtain fragments of human gum tissue removed during routine periodontal surgery in the clinics of the Harvard School of Dental Medicine, and place them on top of five-day-old mouse skulls. Tissues were grown over a period varying from one to two weeks in a roller-tube culture system.

A widespread destruction of bone tissue was found in the area immediately around the implanted gum tissue especially, when microscopic examination of the skulls was made. When the identity of the factor causing the bone resorption is found, an attack can be made on it.

CANCER VIRUS

Kidney Bean Extract Slows Virus

An extract of the common kidney bean can slow the action of a cancer virus in mice, a biochemist at Roswell Park Memorial Institute, Buffalo, N.Y., reports.

Research by Dr. Marvin Tunis shows that when Friend Leukemia Virus (FLV), which produces leukemia in mice, and a particular portion of the extract are injected into a mouse at the same time, the virus is retarded in its action.

Ordinarily FLV produces leukemia infection within one week, Dr. Tunis says. The spleen enlarges five to 10 times its normal size because of infiltration by huge numbers of cells. Yet when the virus is injected in combination with kidney bean extract the mouse shows no apparent infection for a time, and the increase in spleen size does not begin for about two weeks.

"If we can determine exactly how the extract protects against the action of FLV," Dr. Tunis explains, "it is conceivable that we can apply our knowledge to halting the action of other viruses, even human ones. And perhaps we can retard them for longer than two weeks."

Human cancer has not been proved to be caused by a virus although research has indicated that possibility.

BONE RESEARCH

Fragile Bone Study Gets Grant

Bone fragility, or osteoporosis, one of the problems of old age, will be the subject of a five-year study at the Hadassah University Hospital in Jerusalem under a one-million-dollar grant from the U.S. Department of Health, Education and Welfare.

The program calls for the study in its relation to bone fracture, as well as other factors associated with the disease.

The road safety department of Israel's Ministry of Transport is cooperating in the program.