medical sciences

OPEN-HEART SURGERY

Postoperative psychosis

Improved operating room techniques and surgical procedures have effectively lessened the obvious physical dangers of open-heart surgery, but the high rates (up to 30 or 40 percent) of postoperative psychosis indicate the need for a better understanding of the psychological problems caused by open-heart surgery.

Among general surgery patients the rate of psychosis is less than 0.1 percent; but in the first 48 hours after surgery many cardiotomy patients show signs of perceptual distortions, visual and auditory hallucinations, disorientation and paranoid delusions. Not only is surgical recovery impeded, but patients may be driven to such actions as pulling out tubes or attempting suicide.

Drs. Ottis L. Layne Jr. and Stuart C. Yudosfky of the Baylor College of Medicine, Houston, report in the March 11 NEW ENGLAND JOURNAL OF MEDICINE on their attempts at a better understanding of this postoperative psychosis. At the Texas Medical Center in Houston, they gave comprehensive neurologic examinations to 61 cardiac patients the evening before their operation. Two out of three of the patients were extensively interviewed and encouraged to discuss any problems or apprehensions they might have about their disease or the upcoming surgery.

After surgery, mental status and physical recovery were closely monitored. Results indicate that in the patients who did not or could not express preoperative anxieties the psychosis developed more frequently. There was 50 percent less incidence of postoperative psychosis in the patients who received the psychiatric interview.

CHRONIC PAIN

Fooling the brain

Chronic pain can be treated surgically by severing nerves or by destroying a small part of the brain that perceives pain, but these methods are destructive. Doctors at the Duke University Medical Center in Durham, N.C., are now treating selected cases of chronic pain (spinal injuries, multiple disk operations, severe back pain and some cancer patients) by using electrical impulses to fool the brain.

A small device consisting of platinum electrodes and a radio receiver is implanted beneath the patient's skin on the spinal cord. When pain occurs an antenna is placed over the device and a radio signal from a small battery-powered transmitter activates the receiver. These radio signals, which the patient himself controls, interfere with the pain messages being transmitted to the brain and the patient feels only a tingling or slight vibration in the painful region.

HODGKIN'S DISEASE

Removal of a barrier

In the past, studies have shown that appendectomy increases a person's liability to Hodgkin's disease. Now, say Drs. Nicholas J. Vianna, Peter Greenwald and J. N. P. Davies, studies in New York show that tonsillectomy also increases the chances of Hodgkin's disease.

Using 125 Hodgkin's patients and 125 control patients in the hospitals of Nassau and Suffolk Counties on Long Island, the researchers obtained data indicating that the risk of developing Hodgkin's disease is 2.9 times as great among patients with a past history of tonsillectomy as it is among patients with no such past history.

The removal of lymphoid tissue (appendectomy and tonsillectomy) also occurs naturally at the age of 12 or 13 years when there is an involution of this tissue in the mouth and throat areas. Previous studies have suggested that the rapid rise in the incidence for Hodgkin's disease among persons in their mid and late teens might be related to this natural removal of lymphoid tissue.

Based on all these findings, the researchers suggest in the Feb. 27 LANCET that the removal of lymphoid tissues (surgically or naturally) takes away a protective barrier that may leave a person vulnerable to Hodgkin's.

ANESTHESIOLOGY

Mixing alcohol and narcotics

A mixture of ethyl alcohol and morphine is being used in a general anesthesia technique under development at the Ohio State University Hospital. The combination has essentially the same effects as other general anesthetics but it has added advantages. There is no disturbance to heart rate, rhythm or blood pressure and no harm to the liver or kidneys. The danger of an operating room explosion is less, and both drugs are inexpensive and available.

During the post year the ethanol-morphine anesthesia has been used with good results on about 150 patients in a broad range of operations, including 21 cases of open-heart surgery. However, cautions Dr. Charles E. Reier, "We will require a lot more laboratory investigation of the method." Dr. Reier, instructor in the department of anesthesiology at the university's College of Medicine, developed the procedure.

PREVENTIVE MEDICINE

Fluoride in vitamin drops

Effectiveness in the prevention of dental decay by the use of fluoride is well accepted. However, in many parts of the world resistance to fluoridation of water supplies or the absence of a public water supply prevents the administration of this treatment. The addition of fluoride to a daily administered (by drop) solution of vitamins has been suggested as an alternate method.

Working in Stockholm through city child welfare centers, which are attended by about 85 percent of the city's children, Dr. Lennart Hamberg has conducted a study on the effectiveness of the addition of sodium fluoride to a solution of vitamin A and D drops. His findings are reported in the Feb. 27 LANCET. Of 705 children taking part in the experiment, 342 received the fluoride treatment and 363 were in a control group. All the children received yearly examinations from the time of their first birthday. After six years the fluoride group had up to 57 percent fewer decayed teeth.

Dr. Hamberg, of the department of pediatrics at the Karolinska Hospital in Stockholm, states that the simplicity, inexpensiveness and optional character of this method combine to make it far superior to all previous forms of fluoridation.