orthopedics

Gathered from the meeting of the American Academy of Orthopedic Surgeons in New York

PROSTHESIS

Vietnam amputees back on active duty

Twenty-two of 172 leg amputees, casualties of the Vietnam War, are getting along so well with artificial limbs that they have been retained on more or less active duty, Capt. Richard B. Welch of the Army Medical Corps reports. This includes one soldier with amputation on both legs.

Land mine injuries have resulted in amputations more than any other type, but in spite of increased deadliness of the weapons, mortality from amputations has dropped to two percent from a high of 33 percent in the U.S. Civil War.

Helicopter evacuation to modern Army hospitals accounts for the fewer number of deaths, and improved surgery, along with antibiotics to prevent infection, insures the best possible manipulation of stumps in early prostheses.

Capt. Martin C. Wilber, head of orthopedic service at the U.S. Naval Hospital in Philadelphia, reports a new method of amputation that has replaced the former so-called guillotine type, which was performed in former wars when speed was essential to prevent infection. The current procedure creates skin flaps which can cover the stump later, affording quicker fitting of artificial limbs.

JOINTS

Bones pop in and out

Shoulder bones that slip out of place and in again are more common than is generally believed, says Dr. Martin E. Blazina of the University of California at Los Angeles. The injury is different from a dislocation, in which the bone pops out and stays there until corrected.

In two-thirds of the 34 cases studied by Dr. Blazina, the problem started following a football injury. Most of the athletes were hurt while tackling, although the injury occurred in some while they were blocking or catching a pass. The slipping also has occurred in water polo, basketball, wrestling and weight lifting.

Surgery improved the condition in 19 of the cases out of 22. The condition is accompanied by pain or numbness, and sometimes by weakness.

SPECIALIZATION

More Orthopedists needed

Eighty percent of the orthopedists surveyed by a special committee reporting to the academy meeting are unable to keep pace with the demand for their services, even by working 64 hours a week.

There are three orthopedists for each 100,000 of population, which is adequate for acute cases, a 264-page preliminary report says, but "this does not take into account such factors as patient satisfaction, waiting periods or quality control."

The committee recommends a national health program for orthopedics, and an additional 5,750 practicing specialists in the field by 1980.

The report estimates the cost of training the specialists needed for teaching and treatment at $5.25 million a year over the next 10 years.

The report recommends the establishment of a National Center of Musculoskeletal Diseases. It should include both basic and clinical research in all areas related to bone and joint conditions.

CEREBRAL PALSY

Tendon and muscle transfer

Cerebral palsy is a convenient term for impaired neurological function due to brain injury from birth or early infancy. When the child's deformity includes a scissorlike gait, a tendon and muscle transfer can improve the walking ability.

A follow-up of 31 patients with this transfer showed that all except four had improved their gait or had become ambulatory for the first time. These four were further handicapped by blindness, severe mental retardation or severe crippling, the orthopedic meeting was told.

The technique, which involves attaching muscles from the front to the back of the pelvis, is reported by Drs. Charles T. Stephenson and Michael M. Donovan, both of Houston, Tex.

Not only was the stability of the hip found to be increased, but improvement was seen in other muscle groups, such as those that bend the knee and ankle.

IMMUNOLOGY

Rejection studies aid cancer research

More than one scientist is seeking better ways to prevent transplant rejection. In New York City Nobelist Peter B. Medawar, the British biologist, expressed belief that the knowledge gained in trying to overcome organ rejection could be adapted to the treatment of cancer.

In transplantation, an attempt is made to reduce the body's defenses so that it will accept the graft. In cancer treatment, he explains, the reverse would be sought by injection of lymphoid cells that are involved in the defense mechanism.

Dr. Medawar, who is director of the National Institute for Medical Research in London, won the Nobel Prize in Physiology or Medicine (shared with Sir Macfarlane Burnet of Australia) for showing that rejection of grafts is an example of the body's immunity to foreign bodies, whether they be transplants or bacteria.

The advantage of the currently used anti-lymphocyte serum, or ALS, is that it lowers the body's immunity against grafts, yet interferes very little with the patient's ability to fight general infection (SN: 8/10, p. 132). He told the orthopedic surgeons that "what ALS can do well, other agents will one day be found that can do better. It might be possible to build up a tolerance to foreign grafts that are introduced in small amounts gradually."