Selected Abstracts

Preliminary Experience with Aspirin for Anti-coagulation in Children with Prosthetic Cardiac Valves. Gerald S. Weinstein, Constantine Mayroundis and Paul A. Ebert. Ann. Thorac. Surg., 1982, 33: 549-553.

A RETROSPECTIVE REVIEW was done to assess the effectiveness of anticoagulation with aspirin in 18 children who had undergone prosthetic cardiac valve replacement. Twelve of the 18 patients had at least one mechanical valve. An additional five received warfarin for long term anticoagulation. The 18 patients received aspirin, 6 mgm/kgm of body weight per day up to 600 mgm/day, for anticoagulation. Five patients also received dipridamole, 25 mgm/day for children less than 12 years old and 50 mgm/day for children 12 to 18 years old.

During a follow-up interval of one to 59 months, a mean of 20.4 months, no thrombolic, embolic or bleeding complications occurred. Results of a review of another series of 19 showed that children receiving dicumarol or warfarin are not dependably protected against thromboemboli and that hemorrhagic episodes occurred often. In addition, children taking aspirin or no medication had few embolic complications and no bleeding cdmplications.

The results of the authors and a review of the literature confirm the conclusion that warfarin has no demonstrable advantage in children and carries attendant risks. Aspirin, with or without dipyridamole, provides adequate protection against thromboembolism and avoids hemorrhagic complications in children with prosthetic cardiac valves.

Donald C. Watson

Chronic Traumatic Thoracic Aneurysm; Influence of Operative Treatment on Natural History: an Analysis of Reported Cases, 1950-1980. Betsy A. Finkelmeier, Robert M. Mentzer, Jr., Donald L. Kaiser and other. J. Thorac. Cardiovasc. Surg.,1982, 84: 257-266.

THIS excellently written review will stand as a landmark in the surgical literature regarding the problem of chronic traumatic thoracic aneurysm. The influence of operative treatment upon the natural history of this lesion is analyzed.

Twelve patients from the institution of the authors, the University of Virginia Medical Center in Charlottesville, Virginia, and all 600 of the in. stances which were reported upon in the world medical literature between 1950 and 1980 were studied. After the elimination of duplicate reports, 413 known patients with chronic traumatic thoracic aneurysm were found. Of these, sufficient information for use in the data analysis was available upon 392. The results of medical and surgical treatment of these patients were compared using standard statistical techniques.

Eighty-eight per cent of the patients were male; 12 per cent were female. Ninety-four per cent of the aneurysms occurred at the thoracic isthmus; of the remainder, one-half, were located just distal to the aortic valve and one-half were in the aortic arch. The majority of lesions resulted from motor vehicle accidents. One-half of the patients were injured between the ages of 15 and 25 years, and the majority were injured before the age of 45 years.

Sixty patients with chronic traumatic aneurysm were treated nonoperatively. Twenty of these 60 patients died during the follow-up period as a result of the aortic lesiDn. Fifteen of these deaths resulted from sudden rupture of the aneurysm, two were attributed to aorta-esophageal fistulas, two to heart failure and one to subacute bacterial endocarditis. Results of actuarial analysis of 60 patients who were treated nonoperatively showed a 71 per cent probability of surviving for five years after injury, a 66 per cent probability of surviving for ten years and a 62 per cent of probability of surviving for 20 years. The probability of being alive and free of signs and symptoms of expansion of the aneurysm 20 years

after injury was only 33 per cent.
Three hundred and thirty-two patients were operated upon for chronic traumatic thoracic aneurysms. The mortality among these patients was 4.6 per cent. The major cause of operative death was bleeding, which occurred in 2.2 per cent of the patients who underwent operations. An additional 1.8 per cent of these patients died of cardiac problems and 0.6 per cent of renal failure. postoperative complications included bleeding in 5 per cent of the patients, cardiae failure in 1 per cent, renal failure in 1. per cent, injury to the spinal cord in 1 per cent and cerebral vascular accident in 1 per cent.
Those who were treated nonoperatively had a lower probability of survival than did those who were operated upon. These results were statistically significant, pO.O06.
James T. Stunn

Acute Renal Failure Complicating Cardiopulmonary Bypass Surgery. S.P.A.Rigden, T.M. Barratt, M.J. Dillon and other. Arch. Dis. Child., 1982, 57: 425-430.
THE DEVELOPMENT of acute renal failure in 24 children after cardiopulmonary bypass operations is examined in detail. Acute renal failure was defined as urinary production of less than 1 ml/kgm/hr averaged over 4 hours which was resistant to volume repletion, dopamine infusion and diuretics or a plasma potassium repletion, dopamine infusion and diuretics or a plasma potassium level greater than 6 mmol/L or a blood urea nitrogen level greater than 40 mmol/L Peritoneal dialysis was used in all children who satisfied these criteria. The technique, duration and complications of dialysis are summarized in this article.
Acute renal failure was more common in two groups of children. Six of 21 neonates who underwent operation had acute renal failure develop, while only eight of 304 children over one year old had acute renal failure, p The over-all mortality associated with acute renal failure was 50 per cent,, which compared favorably with results of previous studies. Younger patients who had acute renal failure after undergoing cardiopulmonary bypass had a higher mortility: 67 per cent in the neonate group, as compared with 38 per cent in the group of children over one year old. Only two patients died as a direct result of renal failure. These data support the conclusion that early and vigorous peritoneal dialysis should be performed after cardiopulmonary bypass operations if oliguria resistant to volume repletion, dopamine infusion and directics, intractable fluid overload or hyperkalemia is present.
Donald C. Watson

Normal Survival Curve Mter Coronary Artery Bypass. Duncan A. Killen, William A. Reed, Suchint Wathanacharoen and others. South Med. J, 1982, 75: 906-912.
LATE SURVIVAL RATES and causes of death of a series of 2.628 consecutive patients undergoing primary isolated coronary arterial bypass were compared to normal survival curves generated from 1970 census data of the United States. The total follow-up time in this series was 13,915,5 patient years. Twenty-six operative deaths occurred in this series: two patients died with single vessel disease, nine with double vessel disease and 15 with triple vessel disease. The late survival rate of the entire series was 90 per cent at five years and 71 per cent at ten years. Progressive disease was present in the proportion of patients free of angina: 81 per cent at one year, 57 per cent at five years and 37 per cent at nine years. The incidence rate of mild or no angina was 94 per cent at one year, 75 per cent at five years and 60 per cent at nine years. The over-all incidence rate of nonfatal acute myocardial infarction was 3.1 per 100 patient years of survival. A second coronary arterial bypass procedure was performed upon 31 patients for an over-all rate of reoperation of lm per cent per year of follow-up study. Cardiac causes accounted for 44.4 per cent of the deaths of patients with single vessel disease, 68.9 per cent of the deaths of those with double vessel disease and 65.7 per cent of the deaths of those with triple vessel disease.
The ratio of the five year actuarial survival rate to that expected for a matched normal population was 1.03 for single vessel disease, 1.0 for double vessel disease and 1 .0 for triple vessel disease. These

ratios at ten years were 1.13, 0.99 and 0.8, respectively. Thus, survival rates ten years postoperatively appeared to approximate the normal survival rates of patients with single and double vessel disease; patients with triple vessel disease appeared to have a deteriorating late course.
Judith S. de Nuno

Post-Emetic Laceration and Rupture of the Gastroesophageal Junction. L.Michel. Acta Chir. Beig., 1982, 82: 13-24.
THE CLINICAL FEATURES, diagnosis and treatment of 40 patients with Mallory-Weiss syndrome and ten patients with Boerhaave's syndrome are compared in this article. All patients presented with postemetic lesions of the gastroesophageal junction. Thirty patients with Mallory-Weiss syndrome had chronic intake of alcohol, and 15 had heavily ingested alcohol during the last hours preceding their acute episode of vomiting. Only one patient with Boerhaave's syndrome had a history of chronic alcoholism. The incidence of hematemesis and melena was significantly higher among patients with Mallory-Weiss syndrome, while the incidence of shock, adult respiratory distress syndrome, pneumomediastinum, pneumothorax, hydrothorax and subcutaneous emphysema was higher among those with Boerhaave's disease. Elevated temperature and leukocytosis with a shift to the left were present in all patients with spontaneous esophageal perforation. Hiatal hernia was found in 16 patients with Mallory-Weiss syndrOme and in one pat ent with Boerhaave's syndrome. One patient with Boerhaave's syndrome had a Schatzki ring, and another had achalasia. Thirty-one patients with Mallory-Weiss syndrome had a total of 38 associated lesions of the upper gastrointestinal tract, 13 of which were bleeding. Mallory-Weiss syndrome was diagnosed with endoscopy in 24 patients, with laparotomy in ten, with contrast studies of the upper gastrointestinal tract of four and by autopsy of two.
Thirteen patients with Mallory-Weiss syndrome and eight with Boerhaave's syndrome were treated surgically. Delay between diagnosis and surgical treatment was 35.5± 7.4 hours for those with Mallory-Weiss syndrome and 44.0 ±8.8 hours for those with. Boerhaave's syndrome.
The overall mortality for the series was 14.0 per cent, with a distribution of 7.5 per cent for those with Mallory-Weiss syndrome and 40.0 per cent for those with Boerhaave's syndrome. The author recommends early diagnosis and surgical treatment for Boerhaave's syndrome, which because of confusing signs and symptoms, is sometimes misdiagnosed as Mallory-Weiss syndrome, for which delay of surgical treatment does not increase mortality.
Judith S. de Nuno

Mediastinal Nonseminomatous Germ Cell Tumors; the Role of Combined Modality Therapy. Nicholas J. Vogeizang, Derer Raghavan, Robert W. Anderson and others. Ann. Thorac. Surg., 1982, 33: 333-339.
BETWEEN January 1963 and July 1981, 12 male patients, 14 to 33 years old, were treated with cisplatin based therapy with or without radiotherapy for nonseminoma tous germcell tumors that appeared to have arisen in the anterior mediastinum without clinical involvement of the testes. Symptoms endured for less than four months in 11 patients and 12 months in one patient. Six patients were treated with combination chemotherapy every three weeks which consisted of: 0.15 mgm/kgm of vinblastine intravenously on days one and two; 30 U. of bleomycin intravenously on days two, nine and 16 and 20 mgm/m2 of cisplatin intravenously on days one through five. A seventh patient was treated with vinbiastine, actinomycin D, bleomycin, cisplatin and cyclophospharnide every three weeks. Five patients were treated without cisplatin but with a variety of other drugs, including methrarnycin, chloranibucil, methotrexate, actinomycin D, vinblastine, bleomycin and cyclophosphamide. Nine patients received radiation therapy: four received 4,500 to 6,000 rads in 200 rad fractions to the mediastinum over four to six weeks; one patient received 3,600 rads to a metastatic lumbar vertebra, and four patients received less than 3,000 rads to the primary lesion. Four patients were also treated by

surgical resection.
All eight patients who were treated medically died with a median length of survival of six months after diagnosis. All patients who were treated surgically remained alive and in completeremission at 12, 15, 34 and 56 months after diagnosis. Two patients who received cisplatin based therapy but no operation achieved partial remission but died at three and nine months after diagnosis, respectively. Two patients who received chemotherapy without cisplatin but with radiotherapy achieved complete remission with radiotherapy alone but died six months after diagnosis.
The authors recommend cytoreductive operation prior to the administration of chemotherapy and radiotherapy. A multicenter collaborative approach is suggested as a means of finding the optimum protocol with which to treat this rare disease.
Judith S. de Nuno