

Selected Abstracts

Pages with reference to book, From 156 To 157

The Histopathology of Small Arteries Following Experimental Microvascular Anastomosis. Robert D. Acland and Laura Trachtenberg. *Plast. Reconstr. Surg.*, 1977,60:868.

Follow-up studies after microvascular surgical procedures understandably are infrequent in humans but a study of anastomotic sites of arteries 1 mm in diameter in rats showed all vessels patent 21 days after anastomosis. There was widespread loss of intima, widespread necrosis of media and dehiscence of sutures. Because arteries in rats have thinner walls than human vessels of comparable diameter, systolic blood pressure in humans is just slightly higher than in rats, and because human pulse rate is one-half to one-third that of the rat, these results are not comparable with human anastomoses.

William T. Kernahan, Jr

Axillary, Subclavian and Brachiocephalic Vein Obstruction. Charles B. Campbell, James G. Chandler, Charles J. Tegtmeier and Eugene F. Bernstein. *Surgery*, 1977, 82:816.

Obstruction of the major veins draining the upper extremities occurs in healthy individuals and in patients with either a recognizable systemic predisposition to thrombosis or some cause for local injuries to the intima. The consequences of occlusion of a major vein of the upper extremity were evaluated in eight patients with effort thrombosis, ten with thrombosis secondary to injury to the intima, six with extrinsic compression and one patient with hypercoagulability.

Twelve of these patients were treated with anticoagulants, and six had operative removal or bypass of the obstruction. Three patients sustained pulmonary emboli; two of them had embolisms develop while receiving anticoagulants and both of these patients died. Swelling, pain, prominent veins and easy fatigability of the affected extremity were delayed sequelae of occlusion.

It was concluded that the initial cause rather than the type of treatment was responsible for chronic morbidity. Thrombosis secondary to intimal injury caused no persistent symptoms regardless of the method of treatment. Effort thrombosis was intermediate, with about three-fourths of the patients complaining that their affected arms tired easily. One-half of these patients had persistent swelling. All of the patients with venous obstruction caused by extrinsic compression had easy fatigability of the extremity. Operative treatment, which consisted of either thrombectomy or direct repair of the affected vein, produced objective improvement in venous outflow that was often unsuccessful in relieving symptoms. The operative approach was reserved only for patients with disabling chronic symptoms.

Moshe Haimov

Heparin-Coated Shunts for Lesions of the Descending Thoracic Aorta; Experimental and Clinical Observations. Walter G. Wolfe, Leonard H. Kleinman, Andres S. Wechsler and David C. Sabiston Jr. *Arch. Surg.*, 1977, 112:1481.

Heparin coated shunts are used frequently to maintain perfusion of the trunk and lower extremity during temporary occlusion of the descending thoracic aorta. Over a five year period, the shunt was used in 39 patients ranging in age from 19 to 27 years of age, who underwent operations for different lesions of the descending aorta. There were 34 survivors, 87 per cent. Twenty-two of the 39 patients had atherosclerotic aneurysms, three of whom had ruptures. Ten patients had traumatic aortic transections, four of whom had acute conditions. Five patients had chronic type III dissection aneurysms and two patients had coarctation of the aorta.

The shunt was placed in the subclavian artery in 17 patients, in the ventricular apex in ten and in the ascending aorta in 12. The distal insertion was either to the descending aorta or the femoral artery.

During clamping of the aorta, a mean blood pressure was measured in ten patients and was found to be

60-+20 mm Hg. The technique is described.

Because of the controversy over site of insertion of the proximal end of the shunt into the left ventricle as opposed to the ascending aorta or subclavian artery, a series of experiments was designed in pairs to evaluate the effects of myocardial performance in dogs. It was found that although neither shunt decompressed the left ventricle fully, the subclavian-femoral shunt decompressed the left ventricle fully, the subclavian-femoral shunt was significantly more effective than was the left ventricle-femoral artery bypass. It was concluded that if a choice existed for sites of insertion of the shunt, it appears that it should be placed distal to the aortic valve as this position provides the least increase in systolic blood pressure and is associated with a lower demand for myocardial blood flow.

Edward A. Dainko

Radiologic Diagnosis of Whipple's Disease; Eight Patients (Diagnostic radiologique de la maladie de Whipple; a propos de huit observations). M. Benozio, H. Legendrc, R. Rymer and J.P. May Ann. Radiol. 1977, 20-461.

The most characteristic roentgenologic features, especially with respect to passage of barium in the small intestine, of eight patients with Whipple's disease were studied. Thickening of the mucosal folds, particularly of the jejunal mucosa, which remained wavy and never became rectilinear, was fairly constantly observed. Spasticity of the small intestine was rarely seen. In most of the patients, roentgenologic changes persisted despite clinical recovery after antibiotic therapy. The differential diagnosis of these patients is discussed extensively.

Stefan S. Stefani

Diagnostic Accuracy of Lumbar Disco-graphy. W.R. Houdgins, spine, 1977, 2:305.

Discograms showing a pattern of herniation were considered positive while normal and degenerative patterns were considered negative in an investigation of the diagnostic accuracy of this procedure. Application of these criteria to published series revealed a sensitivity of 83 per cent and a specificity of 78 per cent. Use of predictive value curves suggested that discography is 75 to 85 per cent accurate in evaluating patients with normal myelograms and without focal weakness, asymmetric reflexes or crossed referral of pain on straight leg raising. In patients who have these neurologic signs but who have normal myelograms, negative discograms should be considered suspect unless the pattern is normal.

Stephan J. Cisternino

Thromboembolic Complications in Coronary Angiography, Prevention with Ac-etyl-Salicylic Acid. O. Storstein, S. Nitter Hauge and I. Enge. Acta Radio). Diagn. 1977, 18:555.

Coronary angiography is associated with many complications and an over-all mortality of 0.1 to 2.6 per cent. Manipulation of catheters, contrast media reactions and thromboembolic phenomenon can create serious complications. Mortality from myocardial infarction is 0.61 per cent of patients who undergo coronary angiography over-all and from cerebral emboli, 0.23 per cent. In 46,904 patients who had coronary angiographies performed from 1970 to 1971, the mortality was shown to be six times greater for those patients in whom the femoral approach was used than for those in whom the brachial approach was used.

A fresh thrombus was shown in one patient at autopsy and, in other instances, catheter emboli have been identified. Fibrin and platelet aggregates adhere to the surface of the catheter. In recent years acetylsalicylic acid was shown to be effective in preventing thromboembolism in patients with Starr-Edwards aortic ball valves. Heparin has little effect on prevention of platelet aggregation and deposition and its use is associated: with definite risks.

An examination of two groups of patients who underwent coronary angiography was undertaken. The first group of 852 patients seen from 1972 to 1973 received no acetylsalicylic acid. The second group

of 1,338 patients seen from 1974 to 1975 received 1 gm. acetylsalicylic acid twice daily on the day prior to catheterization. The same examining physicians were involved in both series. Acetylsalicylic acid was shown ineffective in significantly reducing death from myocardial infarction. The incidence of cerebral embolism decreased from 1.0 per cent to 0.15 per cent in the patients given acetylsalicylic acid.

Denise G.K. Gray

Axial Cineangiography in Congenital Heart Disease-Section I, Concept, Technical and Anatomic Consideration. L.M. Barger, Jr., Larry P. Bliott, Benigno Soto and others. Circulation, 1977, 56:1075.

The concept of axial cineangiography, developed as a consistently accurate approach to anatomic diagnosis in patients with congenital heart disease, is reviewed. Two maneuvers are used. The long axis of heart is aligned perpendicular to the X-ray beam and the patient is rotated so that the heart is sectioned at 30 degree angles.

Normal and abnormal anatomies are illustrated by ventriculograms and drawings for three standard positions. The hepatoclavicular position shows the four cardiac chambers en face and is useful in evaluation of the atrial and ventricular septums, the mitral valve leaflets, the mitral-semilunar valve relation and the origin of the left pulmonary artery. The long axial oblique view profiles the entire muscular septum, the left ventricular outflow tract and the anterior leaflet of the mitral valve. The anterior-posterior axial view is a biplane mode of filming which approximates the position used in conventional anteroposterior and lateral techniques. This is useful for initial evaluation of chamber position. A fourth view, the sitting-up projection, places the pulmonary arteries inferior to the systemic bronchial arteries.

Michael M. Mc Daniel