He did not agree that absence of parietal cell and intrinsic factor antibodies excluded pernicious anæmia. Of patients with this condition about 50% had antibodies to intrinsic factor and about 90% to parietal cells. Thus neither antibody would be detected in about 5% of cases. The presence of gastric acid in this patient would need explanation. Perhaps she could be a case of juvenile pernicious anæmia, since these patients have normal acid secretion and neither parietal cell nor intrinsic factor antibodies. From this point it was crucial to know if the normal Schilling test was performed with or without added intrinsic factor.

Dr Sharma replied that the patient had received no broad-spectrum antibiotic during her stay in hospital. The Schilling test was performed without added intrinsic factor.

Right Brachial Artery Arteriosclerotic Aneurysm with Distal Thromboembolic Phenomena

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The patient, a man aged 78, had a ten-year history of a right brachial artery aneurysm which, in January 1971, for the first time, gave rise to blanching and pain in the right hand, recovering spontaneously over four hours. On admission (5.6.71), he had continuous pain and cyanosis in the right hand following intermittent attacks over the previous ten days.

On examination: Right brachial artery aneurysm 7 cm × 5 cm, with diminished radial and ulnar pulses. Right hand was cold, cyanosed over the radial side and pulps of all the fingers, and had diminished venous filling and all modalities of sensation.

He was treated initially with intravenous heparin. 8.6.71, proximal and distal ligation flush with the aneurysm, combined with a reversed autogenous long saphenous vein bypass graft and homolateral cervical sympathectomy.

Following the operation his hand and distal pulses steadily improved to near perfect function.

Discussion

Brachial artery aneurysms are exceedingly rare from any cause, none being described in association with post-stenotic dilatation, collagen disease or syphilis.

Arteriosclerosis is the commonest cause of peripheral aneurysms except in the brachial artery, as this case is thought to be. The majority have been traumatic in origin, mostly after war or gunshot wounds (Crawford *et al.* 1959, Hughes & Jahnke 1958, Sharp & Hansel 1967). Two mycotic aneurysms, one following subacute bacterial endocarditis, have been described (Hurwitz & Arst 1948, Robb 1962). The overall decrease in mycotic aneurysms has been due to antibiotics. Congenital aneurysms outside the circle of Willis are uncommon and only once has the brachial artery been involved (Colin & Ellis 1971), although arteriovenous malformations have been reported (Cross *et al.* 1958).

In the surgical management of small aneurysms proximal ligation or proximal and distal ligation may be performed, allowing the sac contents to clot. The latter is the safer procedure, as it prevents retrograde filling of the aneurysm. In both, adequate collateral circulation should be proved by arteriography unless a bypass graft is performed at the same time. In suitable cases excision of the aneurysm and end-to-end anastomosis or bypass graft may be performed.

Recent technical advances in vascular surgery certainly spared this patient having an amputation. The operation risks today are far less than those of leaving the aneurysm untreated.

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Taboparesis: Lown-Ganong-Levine Syndrome

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Mr H H, aged 62

History: The patient presented in April 1971, having collapsed at home. He subsequently described blackouts, preceded by palpitations and faintness, occurring every few weeks since 1945.

Past history: Neurosyphilis had been diagnosed in 1960 on the basis of positive serology, elevated cerebrospinal fluid white cell count, and a paretic Lange curve. He had received treatment during a later admission following attempted suicide. At this time he showed a personality disorder and social instability.

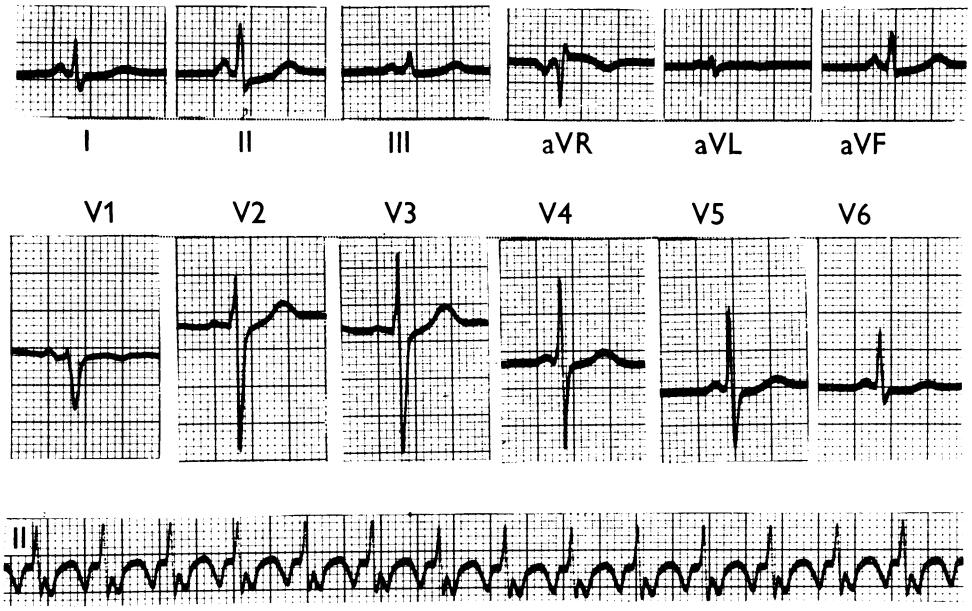

Fig 1 *Electrocardiogram showing short PR interval (0·10 seconds), and rhythm strip (lead II, below) showing atrial flutter with ventricular rate of 150 per minute*

On examination: He appeared facile. There were no cardiovascular abnormalities, and no postural hypotension (blood pressure 120/80, recumbent and erect). Right pupil was dilated, and reacted to convergence only, left reacted sluggishly to light. Ankle jerks absent, deep pain and vibration sense absent below the knees. Proprioception normal.

He was admitted with retention of urine, but this did not recur after the bladder had been emptied by catheterization.

Investigations: Serological tests for syphilis positive in blood but not in CSF, which was chemically normal. EEG normal. ECG (Fig 1) showed a short PR interval (0·10 seconds), without QRS widening or delta waves; this was suggestive of the type of pre-excitation syndrome described by Lown, Ganong & Levine (1952), akin to the Wolff-Parkinson-White syndrome.

Initially it was thought possible that the blackouts might be due to taboparesis. However, the suspicion that he had a form of pre-excitation was confirmed when on three occasions he developed palpitations, with faintness and hypotension, due to atrial flutter with 2:1 block (Fig 1, rhythm strip). Sinus rhythm was restored on one occasion with intravenous verapamil, which we have found to be an effective anti-arrhythmic agent.

Using the technique of His bundle electrography, the narrow PR interval was confirmed, with shortening of the time between low right atrial activation and that of the bundle of His; this is compatible with a rapidly conducting atrioventricular nodal bypass (Krikler *et al.* 1972). The presence of an anomalous conducting pathway would account for the recurrent disorder of cardiac rhythm, associated with hypotension and blackouts.

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Dr D M Krikler said that this case illustrated very well the point that, although it had been assumed that the syncope was associated with organic cerebral disease, other possibilities should not be forgotten. One could predict that the patient was prone to arrhythmias on seeing the short PR interval on the ECG; the new technique of His bundle electrography was invaluable in confirming the presence of abnormal bypasses within the heart, likely to predispose to arrhythmias. The atrial flutter was terminated promptly with intravenous verapamil, which had been found useful in a wide variety of arrhythmias (Schamroth L, Krikler D M & Garrett C, 1972, *British Medical Journal* i, 660); in 4 patients in whom the arrhythmia was associated with pre-excitation it was of great value. There was some reason to believe it might also be helpful in preventing attacks under these circumstances.