mid-March. His blood urea kept about 60 mg. per 100 ml. and his progress was satisfactory. However, on April 3 he was found to be strange in manner and unresponsive when questioned, and further probing showed that he was suffering from delusions. A diagnosis of uraemia was made and he was given glucose and fruit drinks up to 3 pints (1.7 litres) a day and a diaphoretic mixture; the bowels were attended to, and he also received 1/2 gr. (32 mg.) phenobarbitone s.o.s. He slept well that night and was rational the next day. The blood urea reading was 86 mg. per 100 ml. on April 3, and had fallen to 66 mg. the following day. The blood calcium was 11 mg. per 100 ml. (normal). He usually passed 20 oz. (568 ml.) of urine by day and 26 oz. (740 ml.) at night when receiving normal diet and fluids. This indicated a lack of concentrating power of the kidneys. Shortly afterwards he took his discharge from hospital against advice.

On March 8 the patient had developed auricular fibrillation, which responded to digitalis treatment, the drug being discontinued a month later. His pulse remained regular and the heart steady.

Comment

The evidence was in favour of a diagnosis of primary chronic renal disease with secondary increase of calcium in the blood. The fact that the blood calcium had become normal was against a primary hyperparathyroidism, as it is usually stated that without operation a primary condition of the parathyroid would not improve. Price mentions that hyperparathyroidism occasionally occurs as a result of chronic nephritis.

Interesting points were (1) the presence of deposits in the irises; (2) the absence of renal calculi; (3) a temporary attack of auricular fibrillation associated with uraemia.

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BABCOCK'S OPERATION FOR THORACIC ANEURYSM

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The operation described by Babcock (1926; 1932) consists of an anastomosis between the common carotid artery and the internal jugular vein of one side. Former operations for these aneurysms had used the principles of reduction of flow of blood through the sac or else the introduction of foreign bodies into the sac. Babcock's operation is based on the principle of speeding up the flow of blood through the sac and thus reducing the pressure of blood inside the aneurysm.

I have had the opportunity of performing this operation in eight cases. The patients were all male Chinese with aneurysms eroding the anterior chest wall; all complained of severe pain and all had a positive Wassermann reaction.

Method

The operation is performed as follows. Under local anaesthesia a transverse incision is made in the neck (usually right side) about 1½ in. (3.75 cm.) above the clavicle. The sterno-mastoid muscle is cut across and the common carotid artery and internal jugular vein are dissected out and

cleaned. Both vessels are ligated high up, and umbilical tapes are placed around them low down so as to control bleeding. The vessels are divided just below the ligatures and the heart ends are anastomosed. After slowly releasing the tapes and seeing that the anastomosis is watertight the wound is closed.

McCarthy (1930) in an excellent detailed article on the subject discusses the hydromechanics of the operation. Half the circulation to the head is short-circuited back into the heart, and this removes the resistance of all vessels above the anastomosis. Added to the removal of this resistance is the aspiration effect exerted by venous suction. This results in lowered pressure and increased blood velocity inside the sac.

McCarthy uses the analogy of the garden hose with a weak place in its wall. If the water pressure is high and if the spigot of the hose is partially obstructed, the hose will tend to bulge at the weak spot. If, however, the spigot is opened widely, the pressure inside the hose will be reduced, the velocity of the water increased, and the bulge will tend to subside.

Results

Whatever happens inside the aneurysm, there is one striking immediate result of the operation, and that is relief of pain. This disappearance of pain took place in all but one of my cases and was remarked on by the patients immediately after release of the controlling tapes.

Of the eight patients seven left the hospital improved and relieved of pain. The eighth, who had a swelling as big as a fist on the chest wall, died of external rupture of the aneurysm five days after operation. He had not experienced any relief of pain.

In a personal communication in 1946 Babcock wrote: "I have now performed between 26 and 30 of these operations. As some have felt that the relief is due to the division of fibres connected with the carotid plexus, I have had opportunity to note the effect upon pain in four cases of large abdominal aneurysms in which an anastomosis was made between the heart ends of the external iliac artery and vein. In the abdominal cases it was possible to see the effect of the operation upon the aneurysm characterized by a prompt partial collapse of the sac immediately after the systolic wave, showing that prolonged systolic tension was not possible with the large leak back into the veins that had been established. The relief from pain was also striking, particularly in one patient who had required large doses of morphine at frequent intervals before the operation and had complete relief after operation." The operation is an easy one to those familiar with the technique of vessel suture.

At a surgical meeting in Chicago I heard the procedure described by an eminent and thoughtful surgeon as unjustified. It cannot be expected to cure the patient, but surely it is something to be able to relieve his pain, and this is often a distressful feature of these cases.

The only other operation for thoracic aneurysm of which I have had experience is wiring, but I have not observed any relief of pain with this method.

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The Central Office of Information has produced two films on child psychology for parents. The first, "Children Learning by Experience," is a study of children learning in their own way and was designed for teachers in training to provide material for discussion. The second, "Children Growing up with Other People," depicts children's development towards a balance between individualism and co-operativeness.