injections she had no more headache. She received one injection a day during the next two weeks, and her previous complaints—loss of appetite, depression, fatigue, and vertigo—all disappeared. She now does hard work on the land in extreme heat. She receives one injection a week and is free of symptoms.

Case 4.—A man aged 59 suffered for six years from headache in the frontal and occipital regions. The attacks began when he had finished his hard mental work and left for his week-end rest. This is headache of the "relaxation" type, such as is experienced by a priest on a Monday and by students after an examination. Haemoconcentration reduces the volume of blood, and the relaxed arterial walls are not able to resist the dilatant effect of histamine. After seven injections the patient was free of symptoms for six weeks. He was taking small doses of ergotamine tartrate during this period. The headaches then recurred, but twenty further injections completely cured him.

Comment

I have never observed any severe side-effects. The injection of histamine influences the blood pressure and the pulse for only a few minutes. I have therefore used this therapy in heart disease, hypertension, and hypotension. Palpitations occurred in the first days of treatment, but diminished during the course of desensitization. Several patients experienced a metallic or acid taste in the mouth shortly after injection, one patient had diarrhoea which lasted a week, and vomiting occurred after the first two injections administered to a patient with hyperchlorhydria. But, despite these disagreeable secondary effects, I have on more than one occasion heard the patient say, "I am a new man."

The important point of this therapy is that the patient is completely relieved of his pain at the end of treatment and requires no other remedies. I have reached the conclusion that treatment by histamine is worth while in all cases of frequent headaches of long duration.

Summary

The clinical features and possible pathogenesis of headache due to histamine are discussed. A course of treatment by injections of histamine is described. Details are given of four patients so treated.

Medical Memoranda

Unusual Case of Coronary Thrombosis

There is both clinical and pathological evidence that thrombosis occurs at the site of a previous sclerotic or atheromatous area in a coronary vessel. The event that initiates the thrombosis is, however, very variable, and in many instances may not be apparent. The following case is interesting in view of the dramatic nature of the immediate cause of the infarction.

CASE REPORT

A man aged 49 was seen at Professor Robert Platt's out-patient clinic and gave the following history. He had known for some years that he was abnormally sensitive to a wasp-sting, as he had previously developed severe generalized angioneurotic oedema immediately following a sting. Some months ago he had again been stung on the ankle and within ten minutes felt extremely ill, vomited, and had a sudden attack of diarrhoea. He perspired profusely and had agonizing precordial pain, as though there were a tight band around the chest. Simultaneously he developed severe angioneurotic oedema of the face and had a rigor. The next day the symptoms had subsided except for the precordial pain, which lasted for a further two days before disappearing; there was some fever at this time and he complained of shortness of breath. Seven weeks later he had no complaints except slight

residual dyspnoea. Physical examination revealed no abnormalities; the blood pressure was within normal limits.

A clinical diagnosis of myocardial infarction was made. This was confirmed by electrocardiography, which showed sharp inversion of the T waves in the limb Lead I and in the unipolar precordial Leads V4 and V6, the changes being typical of anterior myocardial infarction.

COMMENT

This would seem to be a case of coronary thrombosis which was precipitated by a severe immediate allergic reaction following a wasp-sting. Numerous cases have been reported previously in which thrombosis followed conditions causing shock and sudden fall of blood pressure. Boas (1942), in a review of immediate causes of cardiac infarction, mentions non-penetrating chest injuries, effort, emotion, allergy, cold, infectious disease, operation, and haemorrhage. Among cases classed as due to allergy, one occurred during serum sickness a week after an injection of tetanus antitoxin; one occurred six hours after an intravenous injection of typhoid vaccine; and another developed symptoms of coronary insufficiency after prophylactic pollen injections for hay-fever. Lockhart (1939) reports another case of coronary thrombosis, proved at necropsy, which occurred three hours after an intravenous injection of typhoid vaccine, death taking place one hour later.

Although no records are available of blood-pressure readings during the acute phase of the illness, it is well known that a severe anaphylactic reaction may cause a sudden fall in arterial blood pressure. Such a fall in blood pressure may have precipitated infarction in the case reported.

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A Case of Curling's Ulcer

In 1842 Thomas Curling described an acute ulcer in the second part of the duodenum as a complication of extensive cutaneous burns or scalds. He stated that the ulcer was situated opposite the ampulla of Vater, and described it as small, clean-cut, and deep. Following this description cases of this condition were reported from many places in Britain, on the Continent, and in America. It was suggested that toxins were excreted in the bile, apparently on the supposition that the bile is secreted with such force as to impinge on the opposite wall of the duodenum and ignoring the fact that it is secreted only when food is in the duodenum. A more reasonable hypothesis is an infected embolus from the burnt area, though why infarction should always occur in the same area is not explained.

More recently cases have only rarely been reported. Some textbooks continue to give an adequate description of the condition, others make no mention of it, while some cast a varying degree of doubt over its very existence. Ross (1925), for example, states that "its occurrence is practically unknown and grave doubt has been cast on the statement" (of the occurrence of this complication of burns). The following case is reported to show that such an ulcer does occur, and that it is a complication of burns. It may be objected that the scalds were neither very extensive nor very severe, but an ulcer due to any other cause at the age of 6 years and in the second part of the duodenum is more improbable.

CASE REPORT

On Aug. 26, 1947, a Chinese boy aged 6 years was admitted to the District Hospital, Ipoh, with second-degree scalds from hot water on the lower part of the back of the trunk, the

perineum, and the thighs. There was a moderate degree of shock on admission. His general condition improved with suitable measures, and the scalds were cleansed and then dressed with sulphanilamide cream, and sulphanilamide tablets were given by mouth. During the next three days he had a temperature ranging between 99° and 100° F. (37.2° and 37.8° C.) and a pulse rate which on the evening of Aug. 27 suddenly rose from 90 per minute to 140. There was no vomiting or tenderness in the abdomen. The bowels did not move. The next day the bowels moved, but no blood was noticed in the stool. The pulse still remained around 130, and it was noticed that the child was a little restless. On Aug. 30, in the forenoon, he suddenly passed a very large amount of dark-coloured blood per rectum and a little later vomited a small amount of dark-coloured blood. His general condition deteriorated rapidly, and in spite of measures to replace fluid loss he died the same night.

It is now evident that the haemorrhage must have started insidiously on the evening of Aug. 27, approximately 30 hours after the injury; its insidious onset and progress passed unnoticed until the occurrence of the large melaena and haematemesis, which only then drew attention to the fact that haemorrhage was occurring somewhere high up in the intestinal tract, probably in the duodenum.

At necropsy the intestine was found to be full of blood clot, the organs were pale and exsanguinated, and an acute ulcer was present in the second part of the duodenum 2.5 cm. proximal to the ampulla of Vater on the postero-medial wall. The ulcer was circular, about 1.5 cm. in diameter, with shelving walls, and extended down to the muscular coat; in the floor of the ulcer a small eroded artery was found from which apparently the haemorrhage had come.

Curling's ulcer is probably more common than is realized; it is fair to assume that not all the cases diagnosed will be reported, and it will be diagnosed only in the event of haemorrhage, perforation, or necropsy, and presumably these do not occur in every case.

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A Case of Arteriovenous Aneurysm

The following case of arteriovenous aneurysm between the ascending aorta and the superior vena cava is described because of the rarity of this condition.

CASE HISTORY

A Chinese labourer aged 42 was admitted to the General Hospital, Singapore, on Aug. 22, 1947. The history given was that on the previous day at about 7 a.m., while carrying a bucket of water, he felt a sudden pain over the front of the neck; this was followed by swelling of the neck, dusking of the face, and difficulty in breathing.

He looked very ill and presented a dramatic picture—sitting up in bed, gasping for breath, hardly able to talk, dusky over the face, neck, shoulders, and upper half of the thorax, with some swelling and induration of the soft tissues over these areas. A marked continuous thrill was felt immediately above the inner third of the right clavicle. Percussion did not reveal any enlargement of the heart. The sounds were rapid and regular, with accentuation of the second aortic. A continuous loud machinery murmur with systolic accentuation was heard over the heart and all over the chest anteriorly; it was loudest over the area of the thrill in the right supraclavicular region. This murmur disappeared when firm digital pressure was applied

over the area of the thrill. The blood pressure on the right side was 130/70, on the left side 126/70. Examination of the lungs showed some diminution of breath sounds over the right side. The inguinal lymph nodes were enlarged. There were no genital scars. No abnormality was discovered in the abdomen or the nervous system.

A diagnosis of arteriovenous aneurysm between the aorta and superior vena cava was made. Death ensued after three hours. As he was dying the dusky appearance of his face faded away.

Necropsy.—The heart was normal in size, with post-mortem clots in all the chambers. The muscle was reddish brown in colour and firm. The valves were normal and competent. Pearly-white linear scars of syphilis were present at the root of the aorta and along the arch. At the junction of the ascending and transverse portions of the arch was an aneurysmal dilatation, the sac of which measured 8 cm. in diameter, with an inlet 4 cm. in diameter (Fig. 1); it was adherent to the upper lobe of the right lung. The sac had ruptured into the upper portion of the superior vena cava (Fig. 2). All the large veins of the neck were greatly dilated. Other organs showed congestion.

COMMENT

This is a typical case of spontaneous arteriovenous aneurysm within the thorax. The perforation occurred suddenly during exertion and was followed soon after by evidence of obstruction of the superior vena cava. The thrill and murmur were characteristic of an arteriovenous communication. The heart showed no evidence of enlargement, as the aneurysm did not involve the aortic ring. The aetiological factor was syphilis. Out of the 23,000 necropsies performed during the last twenty years in the Department of Pathology, Singapore, this is the first case of a thoracic arteriovenous aneurysm.

I am indebted to Dr. T. Balasingham for the necropsy report.

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FIG. 1.—A, Aneurysmal sac. B, Left ventricle.

FIG. 2.—A, Opening into superior vena cava. B, Aneurysmal sac. C, Right auricle.