By MISS AMY PHIPPS.

Apoplexy, or cerebral hæmorrhage, spoken of by lay people as "a stroke," is a condition caused by effusion of blood into the substance of the brain or its ventricles. Cerebral hæmorrhages vary considerably in extent, and may occur either as capillary extravasations, usually found in the cortical grey matter, or as isolated effusions, some of which are exceedingly large, in some cases as much as eight ounces of blood being poured out. The hæmorrhages usually vary in size from a small nut to a large walnut; the limiting wall consists of brain debris, outside which lies softened tissue infiltrated with blood serum, this part often being the seat of capillary effusion. When recovery takes place, with absorption of the blood, there may still be some changes in the brain substance.

Cerebral hæmorrhage occurs most frequently in advanced life, though the young are not exempt. In the latter case the disease usually takes the form of meningeal hæmorrhage.

The predisposing causes are many, one of the most important being degeneration of the blood vessels, the walls of the arteries of the brain being particularly liable to these changes taking place. Upon examination, small miliary aneurisms are often detected, situated upon the degenerated vessels, and caused by a kind of arterial sclerosis.

The atheromatous rigidity which so frequently affects the basal vessels probably aids in the production of these aneurisms by interfering with the modifying influence which the elastic walls usually exert on the pulse wave.

The rupture, may, however, take place as the result of weakness of the vessel from a fatty degeneration without aneurism. The vessels most frequently attacked are the middle cerebral arteries and their ramifications, such as the caudate and lenticular nuclei of the corpus striatum and their surroundings. Where vascular degeneration is present, the risk of rupture of the vessels should be anticipated, and increase in the cerebral blood pressure, if possible, guarded against.

Among the many causes of increased blood pressure may be mentioned :—Violent excitement, epileptic fits, alcoholic excess, and some forms of *morbus cordis*. The symptoms of apoplexy are numerous. Premonitory symptoms which often precede the actual onset of the disease, are indicative of cerebral irritation, and casually arise from alteration in the intra-

cranial circulation, and possibly minute hæmorrhages. They include dizziness, headache, neuralgic pains, attacks of motor weakness, often in the parts which are subsequently paralysed, singing in the ears, and transient aphasia; some or all of these symptoms may be present, though in many cases they are apparently absent. At this stage the body temperature is usually sub-normal. The mode of the attack varies considerably. In the majority of cases there is complete loss of consciousness, this phase being sudden or following on a stage of merely mental confusion, or the pre-apoplectic stage may have lasted for several hours before loss of consciousness, loss of power over an extremity supervening at the same time.

Where there is profound coma, there is usually much pyrexia or hyperpyrexia; the respiration is irregular and laboured, the cheeks being puffed out in expiration, the face is flushed, the pulse usually full and bounding : reflex excitability, except the pharyngeal reflex, is usually abolished.

If paralysis be present, the hemiplegia is shown by the utter helplessness in the limbs of one side, and the corner of the mouth will be seen to drop on the affected side. The head is often rotated to the diseased side of the brain. Occasionally there is what is known as the epileptiform onset, when the patient is convulsed as well as insensible, in which case the paralysis often attacks the convulsed side. A few days following the onset inflammatory reaction sets in; the temperature is more elevated, early rigidity may develop, and delirium is not uncommon.

When the acute symptoms have passed, often about ten days after the onset, sensation may begin to return gradually. The tongue generally recovers early, then the facial paralysis, usually the limb most paralysed being the last to recover.

Contractions are of frequent occurrence, and may soon pass off, or may persist for months; or again, sudden œdema of the paralysed side is sometimes seen.

Apoplexy must always be considered as a serious affection. In many instances an attack proves fatal and very speedily, especially when there is profound and lasting coma, well marked stertor, complete relaxation of the sphincter, irregular pulse and slow and laboured respirations.

Such cases result from large hæmorrhages often rupturing the walls of the lateral ventricles, or from large meningeal hæmorrhages,



