

rise to no feeling of pain. It is only when it is excited through the medium of peripheral nerves that the sensation of pain is felt. This is the case with pain in the head as well as pain in other parts of the body, and to the pains which are confined to the head the name of headache is often given, but not always. We find that if pain is localized in a particular organ in the head we do not, as a rule, apply the term "headache" to it. We speak of toothache, of earache, and perhaps of eyeache, but not of headache unless the pain is of a more diffuse character. When it is localized in a part of the head other than the eye or ear, but is of a shooting character and is limited to one particular spot, we often apply the term neuralgia to it. By headache we generally mean, then, a more or less diffused pain in some part of the head. There are two kinds of pain, however. There may be a sharp shooting pain in one particular part of the head or in one particular organ, and associated with this there may be a diffused pain, so that we may have at the same time a toothache and a headache. Not infrequently the headache depends upon irritation in the teeth, in the eye or in the ear, but often the cause of the headache is irritation of the nerve fibers either in fibrous structures in vessels.

The pain which is associated with tumor in the brain is probably due to pressure of the tumor upon some of the fibrous structures within the cranium; but the headache which is associated with various nerve conditions and is known as migraine is probably due almost entirely to the stretching of the nerve fibers within the blood vessels. Various opinions have been advanced with regard to its pathology. Some say it is due to cramp of the vessels and that the vessels during the paroxysm are firmly contracted. Others say that during the paroxysm the vessels are widely dilated. In my own case I have found that both statements are true and both are untrue, both being imperfect. The fact is that I get in migraine a dilatation of the proximal parts of the carotid artery with a contraction of the peripheral part, and that if I take off the strain from the vessels by pressing the carotid the pain is at once relieved.

Now, in regard to the pathology of headache, we have to consider two things, namely, (1) a general condition and (2) a local condition. The general condition renders the patient liable to pain, the local condition determines that the pain should affect his head rather than his intestines or his big toe or some other part of his body. The general conditions which lead to headache are those either of (a) imperfect nutrition or of (b) disordered nutrition. We find headache very commonly in imperfect nutrition, such as anæmia, and