

tuated. Therefore in an enquiry into a subject like that of this paper this fact must be kept in mind.

Various attempts have been made to classify headache. Thus it has been divided into organic and functional, or structural, congestive, toxic and nervous, or, based upon its anatomical seat, into external and internal. However, none of these classifications can be satisfactory until we have a more intimate knowledge of the subject. In this short paper I purpose to deal with but three forms: Headache due to referred pain, that due to increased pressure within the cranium, and toxic headache.

*Referred Pain Headache.*—By this I understand pain experienced in the sensory nerves supplying the outside of the cranium and the dura mater within the skull, but which is not due to a pathological condition locally situated. In other words, there is an irritative lesion at some point in the body which is interpreted in consciousness as a pain in the head.

The question of referred pain has been pretty fully investigated by physiologists, and although they differ as to the theory of its production there is little question as to the fact. Head says that "Any organ in the chest or abdomen may, under favorable conditions, cause referred pain in the head, accompanied by painful areas in the scalp. An area in the scalp does not stand in direct primary relation with any organ in the chest or abdomen, but is associated with the segmental areas of the trunk as low as the tenth dorsal. The lower the segment on the trunk that is affected the more posterior will be the tender area on the scalp; the higher on the trunk the more certainly will the pain and tenderness be found over the forehead."

When impulses pass up sensory, sympathetic fibres from an organ which is diseased they set up a disturbance in the segment to which they are conducted. Now, any second sensory impulse from another part which passes into this segment will be profoundly altered. The resulting stimulus conducted upwards towards the brain will appear exaggerated or may, perhaps, undergo some actual increase in its passage through the excited segment. Thus any otherwise painless stimulation may appear painful. It is probable that impulses passing from an affected internal organ up the white ramus of the sympathetic system produce an alteration in some of the cells of the posterior root ganglion. In these ganglia are the cells which are the trophic centres for the sensory fibres of the skin. Thus stimuli from an internal organ may produce such a disturbance in the ganglion that every stimulus from the peripheral distribution of the fibres