

plete, and needs careful preparation. This was especially true of the cases assigned him for discussion, viz., disturbances of speech. In the history of aphasia there have been three epochs. First, that of Broca, when it was established that lesions in the posterior part of the third frontal convolution of the left side in right-handed and of the right side in left-handed persons caused aphasia. Secondly, the epoch of Wernicke, in which a broad distinction was made between motor aphasia, the variety described by Broca, and sensory or amnesic aphasia, the lesion of which Wernicke showed to be in the first temporal convolution. Thirdly, the epoch of Charcot. Charcot says "a word is a complexus; in it one can discover four distinct elements: the auditory memory-picture, by whose means we are able to grasp the sense of words heard; the visual memory-picture, which enables us to comprehend the words written or printed; and also two motor elements—that is to say, the motor memory of articulation and the motor memory of writing: the first developed by the repetition of movements of the tongue and lips necessary to pronounce a word; the second by the practice of motions of the hand and fingers necessary for writing." These memories, then, joined by association, form the mental substratum of language. But since they are distinct, each may be lost, while the others remain. The loss of visual memories results in word-blindness; the loss of auditory memories in word-deafness; the loss of motor memories respectively in agraphia and motor aphasia. Individuals differ widely in the development of various mental powers. Some remember things seen better than things heard, faces rather than names; others write down what they wish to remember. In these different persons aphasia presents different features; the student suffering more from word-blindness than the laborer. Each of these clinical distinctions has a pathological basis. Motor aphasia is due to lesion of Broca's centre, and this is easily accessible to the surgeon in case the disease is open to his interference. The lesion in agraphia is still undecided. The situation of the lesion causing word-deafness is in the first and second temporal convolutions in their posterior two-thirds. [A diagram was shown, on which all the cases of pure sensory aphasia hitherto