

GENERAL OUTLINE

The temporal lobe is the most common site of onset of focal cerebral seizures. This provides us with abundant material for study.

Patients with temporal lobe seizures most commonly have some form of mental disturbance during or immediately following their attacks. These include automatic behavior with amnesia, illusions, hallucinations, emotional disturbances, and occasional full blown psychotic states.

Patients with temporal lobe seizures frequently have episodic or chronic psychiatric disorders ranging from personality and behavior disorders to various forms of psychosis. Relations between such apparently non-ictal mental disorders and pathological processes (lesions or epileptic discharge) within the temporal lobes is obscure.

Electrical stimulation of the temporal lobe during surgical exploration under local anesthesia has shown that memories, perceptual illusions, and emotions can be aroused in the patient by local activation of the cortex of the temporal lobe. Amnesia and automatic behavior results from stimulation of the region of the amygdaloid nucleus. This usually results in a "suppression" of the electrical activity of the temporal lobe, epileptiform and normal rhythms alike.

All of these findings suggest that the temporal lobe is of particular importance in the elaboration and control of certain forms of memory, dreams, hallucinations and delusions. It may also be related to the nervous substratum of judgments based

upon the interpretation of perceptual experience, and also to certain aspects of the affective or emotional life of man.

Further analysis of such material as is offered by patients with temporal lobe seizures, if made by a team of workers, should yield information of importance to our understanding of the normal function of this large portion of the human brain, and the mechanisms whereby its dysfunction may result in mental disorder and abnormal behavior. Such a project requires a coordinated program of work in psychiatry, psychology, neurology and neurophysiology to achieve the greatest success.