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It has long been recognized that disease may increase the outflow of intracellular enzymes from tissues where these are abundant. Measurements of such enzymes have been of unequivocal value in the diagnosis of cardiac, hepatic, renal and muscular diseases.

Diagnostic considerations in the sphere of neurologic diseases are usually derived from pertinent history and physical findings with but limited guidance afforded by laboratory procedures. The classic biochemical techniques used with advantage in somatic diseases have but limited value in the diagnosis of primary nervous system disorders. In recent years the clinical applicability of quantitative enzyme activity in biologic fluids has been explored extensively particularly in relation to hepatic, myocardial and neoplastic substances. Through this avenue of approach, a battery of sensitive tests has been evolved, often with notable diagnostic and prognostic utility. The central nervous system content of glutamic oxaloacetic transaminase (G.O.T.) is much higher than that of hepatic tissue and almost equal to that of cardiac tissue (Cohen and Nahmis, 1941; Auspurg and Scala, 1935). Lactic dehydrogenase is another such enzyme which is widely distributed in different tissues including nervous tissue.
In neurological disease the rise in C.S.F. enzyme activity depends upon the site of lesion, degree of cellular damage and its accessibility to spinal fluid. The clinical significance of enzymology in most of the nervous system disorders is undecided as yet.

Cerebrovascular accidents constitute about 25% of all neurological disorders (Wadia, 1977). As previously stated, the diagnosis of acute neurological episodes like acute C.W.A. and encephalomeningitis is mainly clinical. It is often not possible to clinically and biochemically differentiate between cerebral embolism and thrombosis on one hand and cerebral hemorrhage on the other. Likewise, in encephalomeningitis the clinical picture and C.S.F. examination are many a time inconclusive and do not give the clinician much scope for exact diagnosis or assessment of prognosis.

Though serum and C.S.F. enzymes have been studied by various workers, yet a clear understanding of their variations in neurological diseases is yet to emerge.

In view of the existing situation in this field, the present study was planned to evaluate the importance of C.S.F. and serum levels of Aspartate transaminase (A.S.T.) or Glutamic oxaloacetic transaminase (G.O.T.) and Lactic dehydrogenase (L.D.H.) in acute cerebrovascular accidents and encephalomeningitis.
AIMS OF STUDY:

1. To determine serum and C.S.F. lactic dehydrogenase and glutamic oxaloacetic transaminase levels in patients suffering from acute neurological episodes (acute C.V.A. and encephalomenigitides) and in normal controls (persons undergoing spinal anaesthesia for operation of piles, hydronephrosis and varicose veins and having no disease likely to affect the level of transaminase and lactic dehydrogenase).


3. To study the application of these enzyme levels in C.S.F. and serum in the evaluation of acute neurological disorders and in estimating their progress and prognosis.

4. To study the application of these enzyme levels in C.S.F. and serum in the differential diagnosis of the acute neurological episodes being studied.