II. Clinical Aspects of Temporo-Medial Lesions

The clinical features most characteristic of temporo-medial lesions were recognized at the end of the last century. Sanders (1874) described taste sensations associated with epileptic seizures caused by a basal tumor invading the olfactory tract. Anderson (1887) highlighted the relationships between paroxysmal taste sensations or dreamy states and neoplasias situated in the anterior temporal lobe. In 1888 and 1890 Hughlings Jackson linked seizures involving intellectual aura, dreamy states and discrete motoric phenomena to lesions in the temporal lobe and introduced the term “uncinate seizure” to designate unpleasant olfactory sensations resulting from disorders in the uncal area. Within the timespan marked by these early reports and the introduction of modern neuroimaging, significant contributions have further delineated the clinical picture of temporal lesions. While it is impossible to give a detailed history of the literature on this topic, we should nevertheless remember the milestones leading to our present conceptualisation. In the Twenties Cushing stressed the localizing value of visual field deficits and Courville linked acoustic hallucinations to the posterior temporal region. A few years later, Kolodny reviewing a large series of temporal tumors, was the first to relate them to a syndrome including focal and generalized seizures, hemianopsia or quadranopsia, psychic alterations and speech disturbances. In 1953 Gastaut published his critical study on so-called “psychomotor” and “temporal epilepsy”, thus introducing a new dimension to the interpretation of medio-basal limbic seizures and also to the clinical evaluation of lesions occuring in this area. A major consequence of this report on clinical practice was an increased awareness of the immense amount of information emerging from the teams organized around Penfield and Rasmussen, to mention but a few. More recently, the symptoms and signs originating in the temporal lobe were analyzed by Tönnis (1962) and Strobos (1974), who reviewed 1460 cases published between 1921 and 1966. The most frequent features were found to be headache (83%), hemiparesis (82%), mental changes (68%), epileptic seizures (46%) and contralateral homonymous visual field defects (44%). With regard to epilepsy, generalized and focal seizures were observed with approximately the same frequency (20%–21%). Because this study was performed before the advent of computertomography, it is not surprising that the
main symptoms finally bringing these patients to the physician were those resulting from the increased intracranial pressure.

Although the published evidence concerns symptoms and signs related to the various compartments of the temporal lobe, there seems to be no clear clinical distinction between disorders originating in the isocortical regions of the temporal lobe and those of its allocortical areas. In fact, the evidence in the study of Strobos for complex partial seizures (21%) suggests, at least theoretically, the existence of two subgroups: temporo-medial tumors invading the lateral portion of the lobe and tumors of the lateral region which infiltrate the medio-basal area.

Our interest in this distinction was awakened when it became evident that a) patients with complex partial seizures who underwent operative exploration for a temporo-lateral tumor regularly presented an infiltration of the medio-basal region and b) the origins of diffuse temporal tumors were found in the uncal or in the amygdalohippocampal region if complex partial seizures were the initial complaint (Fig. 14).

For these reasons we reviewed the evidence for the existence of lateral and medial subgroups of temporal lesions in a series of 152 consecutive temporal tumors (Figs. 15–17).

Our results may be summarized as follows:
a) patients with temporo-medial tumors are significantly younger at the onset of the illness (median: 37.2 years) than are those with temporo-