Early Diagnosis of Supratentorial Tumors

Prefrontal Tumors

Despite the use of modern neuroradiological tests, prefrontal tumors (those involving the part of frontal lobe located anteriorly to the ascending frontal gyrus) are rarely diagnosed at an early stage (Figs. 1-10). We often see the clinical-radiological picture of a voluminous lesion with manifest symptoms. Involvement of the frontal lobe is a serious situation and can greatly affect both the possibility of radical surgery and prognosis quod valetudinem. Hence early diagnosis is a necessity. Symptoms due to a frontal tumor frequently consist of the so-called frontal psychorganic syndrome. This is a psychopathic condition characterized by a triad of symptoms: dis-

Fig. 1 Prefrontal parafalx left metastases: 3 mm. Axial $T_1$-weighted image following i.v. contrast enhancement (arrow)
orders of mood and character, disorders of activity and behavior, and intellectual disorders.

The mood disturbances have a slow and progressive course; thus, if they are not associated with other disorders, they are rarely helpful for making an early diagnosis. The presentation of these disorders varies, ranging from a “good mood”, only considered pathological with difficulty or after careful observation of the relatives, to a dysthymic picture characterized above all by the use of obscene and facetious language. This disorder is called “frontal moria”, consisting of excessive self-assurance, loquacity, affective indifference, joviality, and childish behavior. Another characteristic of this syndrome is disinhibition: the patients are not capable of critical judgments about their own social activities and behavior, which are restricted to playful, inappropriate language, often tending to sexual expressions, although the sexual potency of these patients is usually greatly reduced. The patients are unable to follow abstract logic and cannot cope with the problems arising in everyday life. Incongruous euphoria is often observed in the physician-patient relationship: patients are usually respectful and attentive to their physician but those patients with frontal tumors are uninhibited and often make scurrilous remarks about the physician and nurses. Euphoria often alternates with irritability. The patient resents any personal allusion and reacts violently to the slightest irony.

Motor activity disorders consist of hypokinesia, akinesia, and total or partial lack of responsiveness to environmental stimuli. There is no motor paralysis but the patient seems affected by a “mental paralysis of the limbs”, with an inability to initiate action and work out the motor scheme. There is difficulty in initiating a marching step, which has a widened base and is characterized by short steps. From a psychodynamic point of view it seems that the patient becomes unable to change readily from one thought pattern to another until abulia and apathy develop and the patient isolates himself, answering only in monosyllables to show that he has understood.

Patients sometimes assume the typical posture of catatonia: the patient becomes immobilized for a considerable time in one posture or may maintain indefinitely the position in which his limbs were manipulated by the examiner. Generally, the patient accepts, without any reaction, the fact that he must undergo a serious oper-