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Pseudoradicle Outset of the Brain Tumor

Rzekomokorzeniowy początek guza mózgu

Brain tumors are characterized by a typical slow increase of complaints. The most frequent (70—90% of cases) and often early symptom (76%) is a headache. This is accompanied by movement disorders, nausea, vomiting (41%), epilepsy (36%), speach disorders. Complaints last from several weeks to several years before a brain tumor is diagnosed. Some authors distinguish a different, often confusing outset of a tumor disease. Karkous (4) recognized, besides a typical tumor history, a history of a stroke, pseudo-inflammation, trauma or psychic disease features.

The frequency of a different outset of the disease confirmed in supratentorial gliomas treated in the Neurosurgery Department of the Medical Academy in Lublin, is presented in Table 1.

The possibility of an apoplectic course of disease is connected with a markedly pronounced formation of pathological blood vessels and appearance of necrosis in the tumor. Often, cerebral hemorrhage or thrombosis occur, which, depending on the type of vessels, may be palpable during the interview. More intense vessels episodes, as hemorrhage to the tumor with creation of hematoma, thrombosis of an afferent vessel or abundant subarachnoid hemorrhage may markedly exacerbate the course of the disease and suggest a vessel etiology. Apoplectic history of the brain tumors was confirmed by Gdakowicz (2) and our own data (6).

Pawlak and Kołczak (5) point to the pseudoinflammatory course of the brain tumor.

Psychic disorders, as neurosis or psychic disease are, according to Frankel and German (1), early manifestations of brain tumors in 7% of cases, and dominant in 3% of symptoms.

A frequently encountered problem is a combination of trauma with tumor. Hołyst (3) found in 5.5% of cases an unquestioned influence of trauma of the head on development of the intracranial tumor. He claims, that in the case of meningioma, the trauma may be an etiological factor, while in gliomas — can only influence a more rapid manifestation of the tumor through acceleration of decompensation of the intracranial contents. This occurs due to a hemorrhage into the tumor and appearance of an independent hematoma or posttraumatic edema.

No data were found in the literature on the pseudo-radicle outset of brain tumor, which demanded diagnosis of the spine canal prior to a proper recognition of the brain tumor disease.

The presented cases confirm a possibility of such disease outset.

Table 1. Non-tumor outset of the brain tumor

OUTSET	%
stroke	8.0
trauma	5.3
inflammatory	2.7
psychic disease	1.3
TOTAL	17.3

CASE 1

The patient R. S., age 50, male, a farming technician. In 1977 he was treated in the Department of Neurology because of radicle pains. In August 1990 the spine pains were more intense and radiated to lower extremities. Eventually, the patient was unable to walk. The function of the spincter was normal. In September 1990 the patient was hospitalized with suspicion of intracranial injury, he was conscious, with a complete verbal contract, fundus of the eye — normal, pupilla — equal. A spastic, deep paresis of the lower extremities was found with the Babiński's symptom on the right side, superficial anaesthesia distally intensified with unstable border of weakness from Th10. The Laseque's symptom, bilaterally positive at the angle 45°. Staying in bed. The patient was qualified for ascending myelography. After several hours of observation, two attacks of generalized convulsion with loss of consciousness occurred. Deep paresis of lower extremities deteriorated, followed by paralysis and disorder of spincter function. Computed tomography of brain (1990.09.16) showed: the neoplastic process of the glioma type was localized in the great commissure with hypertrophy of the parasagittal part of both parietal lobes (Fig. 1).

Because of localization and the size of the tumor, the patient was not qualified for operation. Instead, a telecobaltotherapy was applied to the patient; he is still alive.

CASE 2

The patient A. S., age 35, female, a nurse. In April 1988 she noticed a paresis of the left foot. No pains accompanied that symptom. The patient was hospitalized with suspicion of lumbar dyscopathia. Conscious, with a full verbal contact, fundus of the eye — normal. Paresis of the left foot was found. Left extremity slightly slimmer, weakness of the pulse on the dorsum artery of the left foot, which was colder, reflexes were equal. No Laseque's symptoms, superficial sensation decreased on the left low extremity, more pronounced on lateral surface of the leg. During walking, she pulled her left low extremity. The cerebrospinal fluid — normal. Computed tomography of the brain (1988.08.08)

showed, after a contrast application, the presence of intensified, hyperdensive area in the right parietal lobe, 3 cm in diameter and appearance of meningioma with a delicate zone of swelling without dislocation of the ventricular system (Fig. 2).

Operated on 1988.08.11 by craniotomy of the right vertex region with crossing of the middle-medium-line, a meningioma, of plum size with insertion to the lateral wall of the upper fibular sinus. Postoperative course with no complications. The postoperative wound healed by first intention. A control CT examination (1988.09.26) showed a condition characteristic of a complete removal of the meningioma of the right vertex region with a typical postoperative picture. Paresis of the left foot diminished.

The patient is under control of the Neurosurgery Consulting Unit. She walks well, only slight sign a paresis of the left foot was visible.

CASE 3

The patient E. M., age 23, male, a technician. Since 1982 pains of the left thigh. In 1985 strong pains of the lumbo-sacral region with radiation down the thigh and leg. Hospitalized in 1989 with suspicion of disk rupture, the radiculography showed deformation of the radicle sheaths at the level of L3 to L5 and protrusion of nucleus of the pultaceous region L3-L4 and difficulty of the contrast flow at the level of L5-S1. Transferred to Neurosurgery Clinic, conscious, with a full contact, without papilledema, with a slight nystagmus, bilateral, symmetric weakness of ankle reflex, a positive straight leg test on the left at the angle 35°, and on the right 40°, without sensory disturbances; walked well. The computed tomography of the lumbar region of the spine (1989.03.20) in the intravertebral space L3-L4 and L5-S1 after an intraspinal contrast application (Iopamiro) did not show any compression or dislocation of the meningeal sacs and of the nerve rootlets. The width of the intravertebral spaces and the bone structure of the vertebra were normal.

In October 1989 a weakness of visual acuity appeared; also a strabismus of the left eye and a diplopia. Papilledema of the left eye was found. The computed tomography of the brain (1989.11.23) showed the presence of a tumor intensified by contrast in the left fronto-parietal region of the brain with passage to the left region, showing the features of meningioma (Fig. 3).

Operated on 1989.12.04 by craniotomy; meningioma was removed completely, with hypertrophy on the anterior part of the falx and of the upper sagittal sinus. Healing of wound by first intention. The patient walks normally, full verbal contact, no complaints, no defective neurological symptoms, left hospital. The patient is under control of Neurosurgery Consulting Unit.

In conclusion it can be said that the pseudo-radicle outset is one of the probable confusing manifestations of the brain tumors.

REFERENCES

1. Frankel S. A., German W. J.: *Glioblastoma multiforme*. Review of 219 cases with regard to natural history, pathology, diagnostic methods and treatment. J. Neurosurg. **5**, 489, 1958.
2. Gdakowicz B.: Guzy mózgu o udarowym początku choroby. Wiad. Lek. **15**, 1137, 1963.
3. Hołyst J.: Związek urazu czaszkowo-mózgowego z nowotworem śródczaszkowym. Pam. VI Zjazdu Pol. Tow. Neurol. Neurochir. Łódź 1965, p. 134.
4. Karkous E.: Des glioblastomes cérébraux. Etude anatomo-clinique à propos de 115 observations. Toulouse 1960.
5. Pawlak Z., Kałczak M.: Rzekomozapalny przebieg guza mózgu. Neurol. Neurochir. Pol. **4**, 523, 1967.
6. Turowski K.: Symptomatologia, diagnostyka i leczenie operacyjne glejaków nadnamiotowych mózgu. Doctoral thesis. Lublin 1979.

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STRESZCZENIE

W 5% przypadków obserwuje się odmienny, mylący, nieguzowy początek nowotworu mózgu. Najczęściej obserwowany jest początek udarowy, rzekomozapalny, urazowy lub o cechach choroby psychicznej. Brak jest natomiast w literaturze danych o rzekomokorzeniowym początku guza mózgu. Przedstawione trzy przypadki wskazują na rzekomokorzeniowy początek nowotworu mózgu.

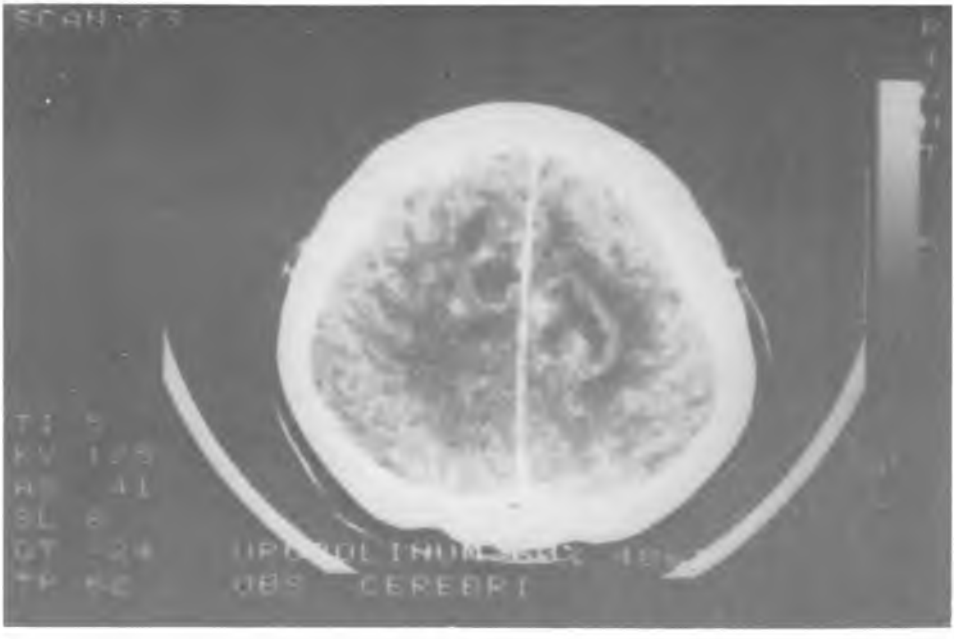

Fig. 1. Tumor of the great commissure with hypertrophy of the parasagittal regions of both parietal lobes

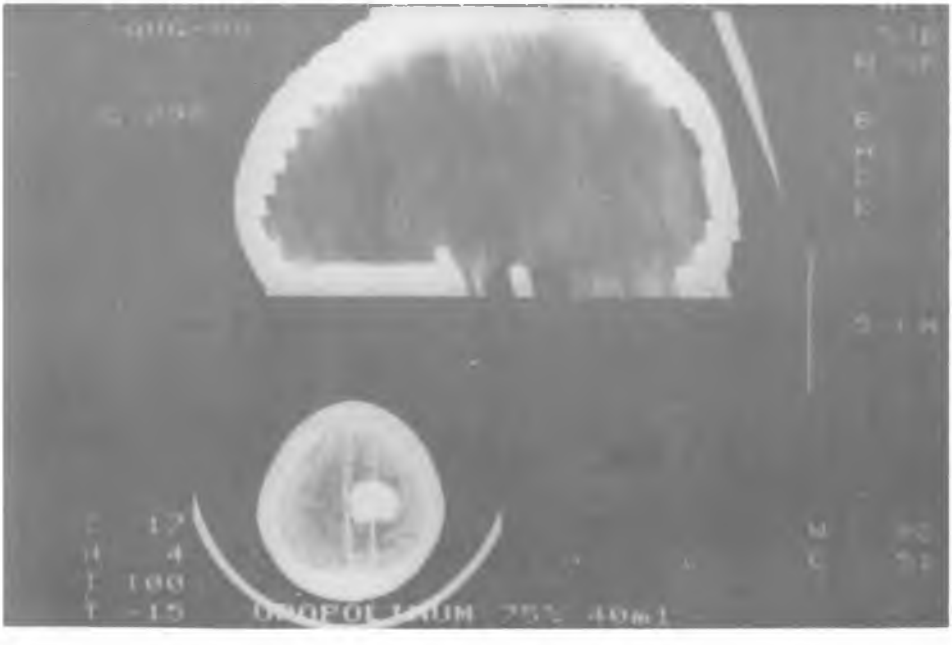

Fig. 2. Parasagittal meningioma of the right parietal lobe

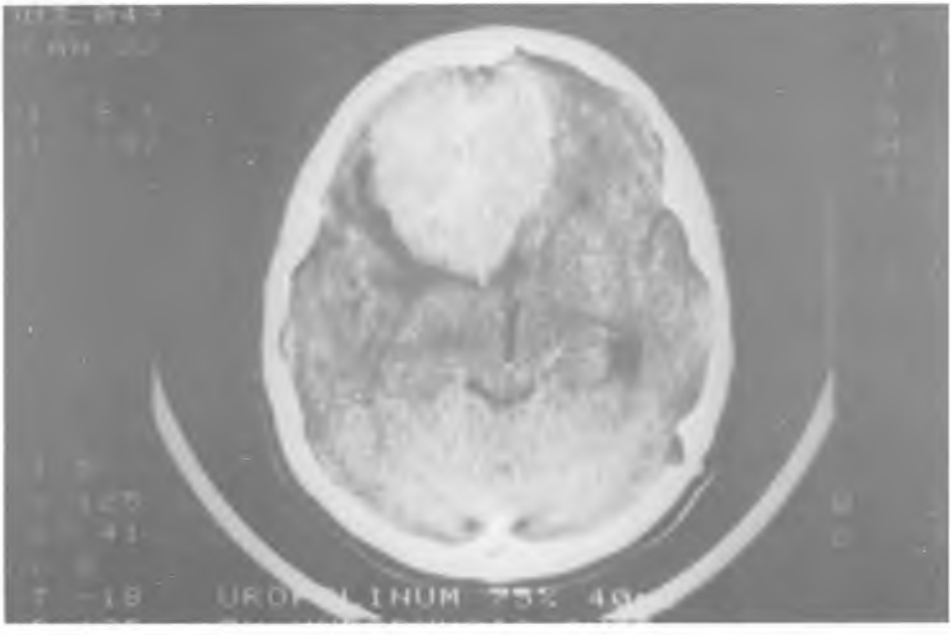

Fig. 3. Large meningioma of the left parietal lobe with hypertrophy to the right side