GIANT RIGHT PTERIONAL MENINGIOMA. CASE REPORT

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Abstract: Intracranial tumours are manifested clinically as a consequence of tumour mass, their brain tumour, cranial physiopathological specificity being due to the spatial conflict born from the development of an CT. meningioma expansive process inside the inextensible cranial cavity. Clinical symptoms resulting from this conflict are the consequence of these local or global disturbances induced by these mechanical effects: compression, intracranial hypertension and distortion of the noble functional elements. Depending on the location and the histological nature, tumour progression is accompanied by complications of the expansion, swelling and / or internal hydrocephalus, which greatly aggravate the mass effect related to tumour volume.

Cuvinte cheie: tumoră cerebrală, CT cranian, meningeom

Keywords:

Rezumat: Tumorile intracraniene se manifestă clinic ca o consecință a masei tumorale, specificitatea lor fiziopatologică ținând de conflictul spațial născut din dezvoltarea unui proces expansiv în interiorul cavității craniene inextensibile. Simptomatologia clinică ce rezultă din acest conflict este consecința acestor tulburări locale sau globale induse de aceste efecte mecanice: compresiuni, hipertensiune intracraniană și distorsiunea elementelor funcționale nobile. În funcție de sediul și de natura sa histologică, evoluția tumorii este însoțită de complicațiile expansiunii, edemul și/sau hidrocefalia internă, care agravează considerabil efectul de masă legat de volumul tumoral.

INTRODUCTION

Brain tumours are a complex pathology that affect all segments of the population, regardless of age or gender, representing proliferative endocranial lesions derived from the nervous parenchyma (1) of the meningeal coatings, of embryonic remnants or metastases, and as any pathology of the central nervous system, brain tumours also have socio-economic implications, especially when they affect children or active persons of young age.

The tumours located in the central nervous system account for 8% of all tumours, of which 85% represent endocranial tumours and 15% spinal tumours; about 2/3 of the intracranial tumours are supratentorial and 1/3 are subtentorial.(2) Meningioma is a benign tumour originating in the arachnoid, 90% being intracranial, the rest of them being spinal. They constitute approximately 15% of all intracranial tumours and present the most increased incidence in the seventh decade, being rare in children but more common in women. They are well-defined tumours and due to their origin in the arahnoid vilosities, they can theoretically be localized anywhere, but most commonly in the Sylvian region, superior parasagittal surface of the frontal and parietal lobes, sphenoid bone, sellar tubercle, the upper surface of the cerebellum, spinal cord and the cerebellopontine angle.

Surgical treatment consists of complete resection of the tumour process, by observing the decompression principles of the nervous structures, recovery of the cerebrospinal fluid drainage ways, collection of biopsy material for the pathological diagnosis (2,3,7) adapting the postoperative adjuvant therapy,

the ultimate goal being the rapid and complete socioprofessional reinsertion of the patient.

CASE REPORT

Female patient, P.M., aged 61 years old is brought into the Emergency Service of Sibiu for headache, confusion, dysarthria and unable to maintain ortostatism and walking, symptoms that occur suddenly in the morning of admission. She is admitted to the Neurology Department of the Clinical Emergency Hospital of Sibiu for investigation and specialized treatment.

Past medical history: essential hypertension, chronic ischemic heart disease, morbid obesity, treated as outpatient.

General objective examination on admission revealed malaise, congested skin and mucous, excessive fat tissue, vesicular murmur present bilaterally, exertional dyspnea, BP = 160/80 mmHg, AV = 76 beats / minute, rhythmic heart sounds, peripheral pulse present.

On the neurological examination: the patient was confused, psychomotor agitated, no signs of meningeal irritation, ortostatism and walking were not possible, right oculogyric deviation towards right with a tendency to convergent strabismus and inferior lowering, motor deficit of the left limbs, absent osteotendinous reflexes, cutaneous plantar reflex in extension on the left side, coordination and sensitivity cannot be examined due to patient non-cooperation, sphincter incontinence and dysarthria. During admission, the general condition was moderately affected, the patient remained confused, temporo-spatial disoriented, with psychomotor agitation, left hemiparesis and Anton-Babinski syndrome.

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Article received on 20.02.2014 and accepted for publication on 06.05.2014 ACTA MEDICA TRANSILVANICA June 2014;2(2):221-223

On emergency, cranial CT (figures no. 1, 2) is performed, evidencing an expansive right temporo-parietal process with starting point in the third outer sphenoid wing, marked convexital extension with mass effect.

Figure no. 1. Right sphenoid wing tumour in the outer third



Figure no. 2. Right sphenoid wing tumour with upper extension and marked mass effect



Following the neurological examination and laboratory investigations, but mostly because of the neurologic worsening, the emergency surgery is decided. Right frontal-temporal-parietal flail is practiced observing a well delimitated brain tumour, pink, durally adherent, richly vascularised. Total ablation of a tumour of about 6/8 cm is accomplished (figures no. 3,4,5), decompression of the brain parenchyma, secondary dural plasty, tight suture of the dura, the bone flap reinstatement.

Figure no. 3. Intraoperative appearance



Figure no. 4. Dural insertion tumour that compress the brain parenchyma



Figure no. 5. Histopathological appearance of the evacuated tumour



Postoperative evolution is favourable with the remission of neurological symptoms. Histopathology: meningothelial meningioma. Control cranial CT (figure no. 6), shows total tumour ablation with the complete disappearance of the mass effect.

Figure no. 6. Normal postoperative appearance



DISCUSSIONS

A patient with a brain tumour presents most often a combination of a syndrome of intracranial hypertension and a neurological syndrome given by the location of the process in and/or in the vicinity of an area with a certain functional differentiation (focal neurological syndrome), which can be of deficient type or irritating.(1)

Meningiomas may precede the neurological signs installation up to 10-15 years of evolution, thus, attesting their slow growth rate. The first clinical signs are represented most often by seizures, being closely related to the location of the tumour.

Parietal-temporal location: location of the tumour in the dominant hemisphere is characterized by the elements of Gerstmann syndrome (agraphia, acalculia, agnosia, right-left disorientation) and alexia which have localization value for angular gyrus.(1) Together with aphasia, they give an indication of major hemisphere damage. Tumours of the minor hemisphere are characterized by dressing apraxia and Anton-Babinski syndrome (indifference to illness). Seizures are focal temporal seizures or sensory-motor.

Temporal tumours, the symptoms vary depending on the location and the direction of extension of the tumour, and the histological nature. The combination of symptoms and their evolution is influenced basically by the benign or malignant nature involving personality disorders, vestibular disorders (paroxysmal bouts of vertigo, latero-deviations and retropulsions) (5), combinations of auditory hallucinations, affective disorders, visual field changes, sleep disruption, appetite and sexual function disorders. Complex partial seizures are often intricated, which may be associated with visual field changes.

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Movement disorders are common and are important in establishing the lateral character of the lesion. Clinically, facial and extremity paresis can be found. Cortical representation of the face is in the direct vicinity of the temporal pole. Limb motor deficit is the consequence of cortico-spinal tract affection in the internal capsule. A single facial paresis or one which progresses to the upper limb is the result of cortical suffering. The onset of a motor deficit in the lower limb shows a lesion in the internal capsule. In the profound tumours or those extensive towards the basal nuclei, involuntary movements may occur.

Specific to the temporal localization of the tumour, there are the decrease of thinking activity and speed, emotional lability, memory impairment and decreased auditory and verbal learning and personality change in the sense of installing choleric irritant reactions.(6)

The patient presented uncharacterized atypical symptoms onset, reason for which she was initially hospitalized in the neurology department. Taking into account her personal history, the biological and nutritional status, the paroxysmal symptoms with impaired consciousness, the suspicion of ischemic stroke was initiated initially. Following the laboratory examinations, right wing brain tumour diagnosis in the outer third is set, with marked size growth and convexital extension.

The seriousness of the case was great taking into account the presence of large mass effect and the risk of engagement which led to the urgent transfer to the Neurosurgery Department, where total tumour ablation was practiced on emergency, with the decompression of the compressed structures, resulting in the disappearance of the mass effect and recovery of the cerebrospinal fluid leakage ways.

CONCLUSIONS

- 1. Any neurologic manifestation raising diagnostic suspicions should be paraclinically investigated.
- 2. Peritumoral brain edema with the risk of engagement and appearance of irreversible secondary neurological deficits requires the emergency surgical intervention.
- 3. Total tumour ablation is mandatory, resulting in the decompression of the nerve structures with the remission of the neurological deficits and preventing the relapse rate.
- 4. Early postoperative control CT scan is mandatory to observe the degree of resection, as well as the complications that may occur.

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