



Brain tumors

Signs and symptoms

BIO 389

Hertler/Gramatzki

Signs and symptoms

- **Pathophysiology**
- **Presentation**
- **Grading**
- **Differential diagnosis**

Signs and symptoms

➤ **Pathophysiology**

➤ Presentation

➤ Grading

➤ Differential diagnosis

Signs and symptoms

➤ Pathophysiology

➤ Infiltration of tissue

➤ Compression of structures

➤ Edema

➤ bleeding

Signs and symptoms

➤ Pathophysiology

➤ **Presentation**

➤ Grading

➤ Differential diagnosis

Signs and symptoms

➤ Presentation

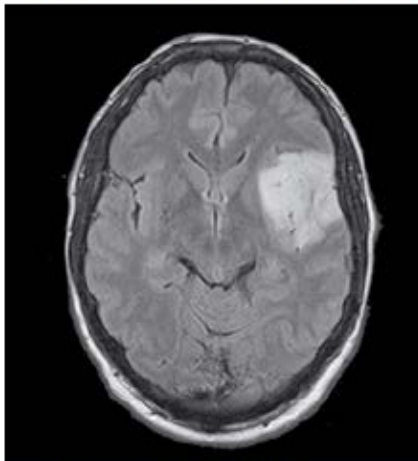
generalized

- Headache
- Nausea / Vomiting
- Seizures
- Cognition / consciousness
- Mental status

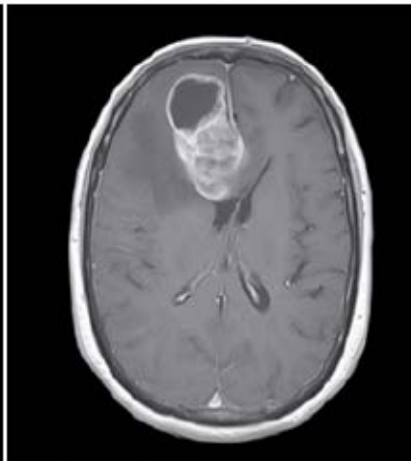
focal

- Motor impairment
- Sensory impairment
- Speech impairment
- Visual impairment
- Hormonal imbalance

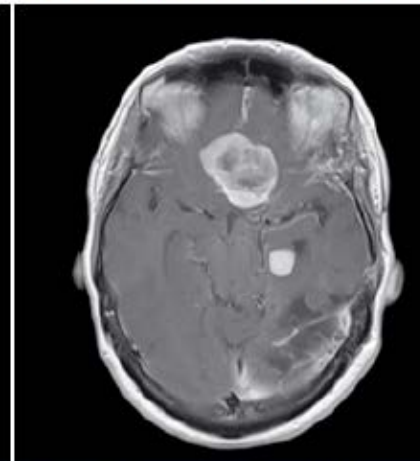
Abbildung 1: Neurologische Symptomatik in Abhängigkeit von der Tumorlokalisation



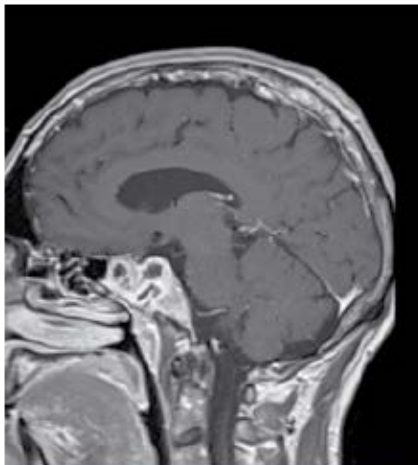
*Epileptische Anfälle
mit Sprachblockade
(Oligodendrogliom WHO-
Grad II, MRI, FLAIR)*



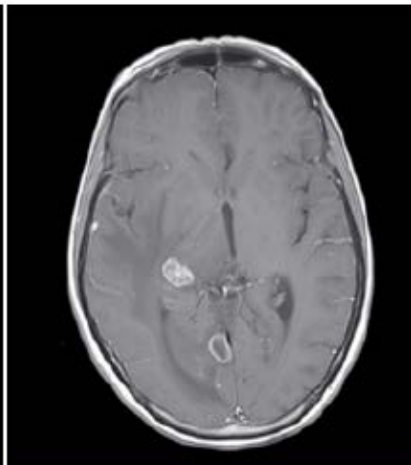
*Wesensänderung,
Kopfschmerzen (Glioblastom
WHO-Grad IV, MRI,
T1+Gadolinium)*



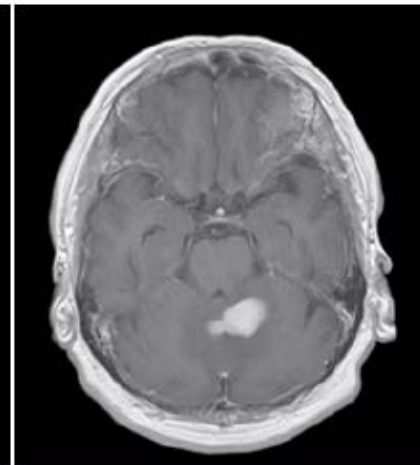
*Kopfschmerzen (multiple
Meningeome WHO-Grad I,
MRI, T1+Gadolinium)*



*Bitemporale Hemianopsie
(Hypophysenadenom, MRI,
T1+Gadolinium)*



*Hemiparese links
(Metastasen bei
Bronchialkarzinom, MRI,
T1+Gadolinium)*



*Ataxie (Primär zerebrales
Lymphom, MRI,
T1+Gadolinium)*

➤ Pa

➤ Pr

Signs and symptoms

➤ Pathophysiology

➤ Presentation

➤ **Grading**

➤ Differential diagnosis

ECOG PERFORMANCE STATUS	KARNOFSKY PERFORMANCE STATUS
0—Fully active, able to carry on all pre-disease performance without restriction	100—Normal, no complaints; no evidence of disease 90—Able to carry on normal activity; minor signs or symptoms of disease
1—Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light house work, office work	80—Normal activity with effort, some signs or symptoms of disease 70—Cares for self but unable to carry on normal activity or to do active work
2—Ambulatory and capable of all selfcare but unable to carry out any work activities; up and about more than 50% of waking hours	60—Requires occasional assistance but is able to care for most of personal needs 50—Requires considerable assistance and frequent medical care
3—Capable of only limited selfcare; confined to bed or chair more than 50% of waking hours	40—Disabled; requires special care and assistance 30—Severely disabled; hospitalization is indicated although death not imminent
4—Completely disabled; cannot carry on any selfcare; totally confined to bed or chair	20—Very ill; hospitalization and active supportive care necessary 10—Moribund
5—Dead	0—Dead

Signs and symptoms

Clinical Elements	Differential Diagnosis to Consider	Action Prior to Biopsy or Surgical Resection
Abrupt symptoms onset	Stroke	Look for vascular territory distribution and gyral patterns of enhancement; DWI may have negative results
Onset in young adults	AIDS and other infectious or inflammatory lesions	HIV testing
Recent dental procedure, ears/nose/throat infection	Brain abscess	Hyperintensity on DWI
History of immunosuppression	Fungal and other opportunistic infections, primary CNS lymphoma	Homogeneous enhancement suggests lymphoma; consider LP and avoid corticosteroids until biopsy
History of autoimmune or inflammatory disease (patient or family)	Multiple sclerosis, sarcoidosis, Behçet syndrome	Look for small white matter lesions on MRI
IV drug addiction	Brain abscess, syphilis, AIDS	Obtain blood cultures
Exposure to tuberculosis, even if remote	Tuberculoma	Chest imaging, PPD test
Travel to countries with endemic infectious diseases	Cysticercosis, hydatidosis, and amebiasis	Look for calcifications on CT and scolex on MRI (cysticercosis); consider LP
History of subtle/transient neurologic deficits or visual symptoms	Multiple sclerosis and demyelinating diseases	Other lesions usually present on MRI
History or presence of oral or genital ulcers	Behçet syndrome	
Rashes	Sarcoidosis, AIDS, Behçet syndrome	

Abbreviations: CNS, central nervous system; CT, computed tomography; DWI, diffusion-weighted magnetic resonance imaging; HIV, human immunodeficiency

virus; IV, intravenous; LP, lumbar puncture; MRI, magnetic resonance imaging; PPD, purified protein derivative.