FUNDACIÓN CARDIOINFANTIL
Instituto de Cardiología

REUNIÓN INTERINSTITUCIONAL

Jorge Humberto Aristizábal Maya

Santiago Vallejo Puerta

Juan Pablo Leal Isaza

Pierre-Y ca Mazeau

UNIVERSIDAD EL BOSQUE

FUNDACIÓN CARDIOINFANTIL
INSTITUTO DE CARDIOLOGÍA

INSTITUTO DE NEUROCIENCIAS UNIVERSIDAD EL BOSQUE

CASO #1

- Hombre
- 51 años
- Conductor
- Lateralidad zurdo

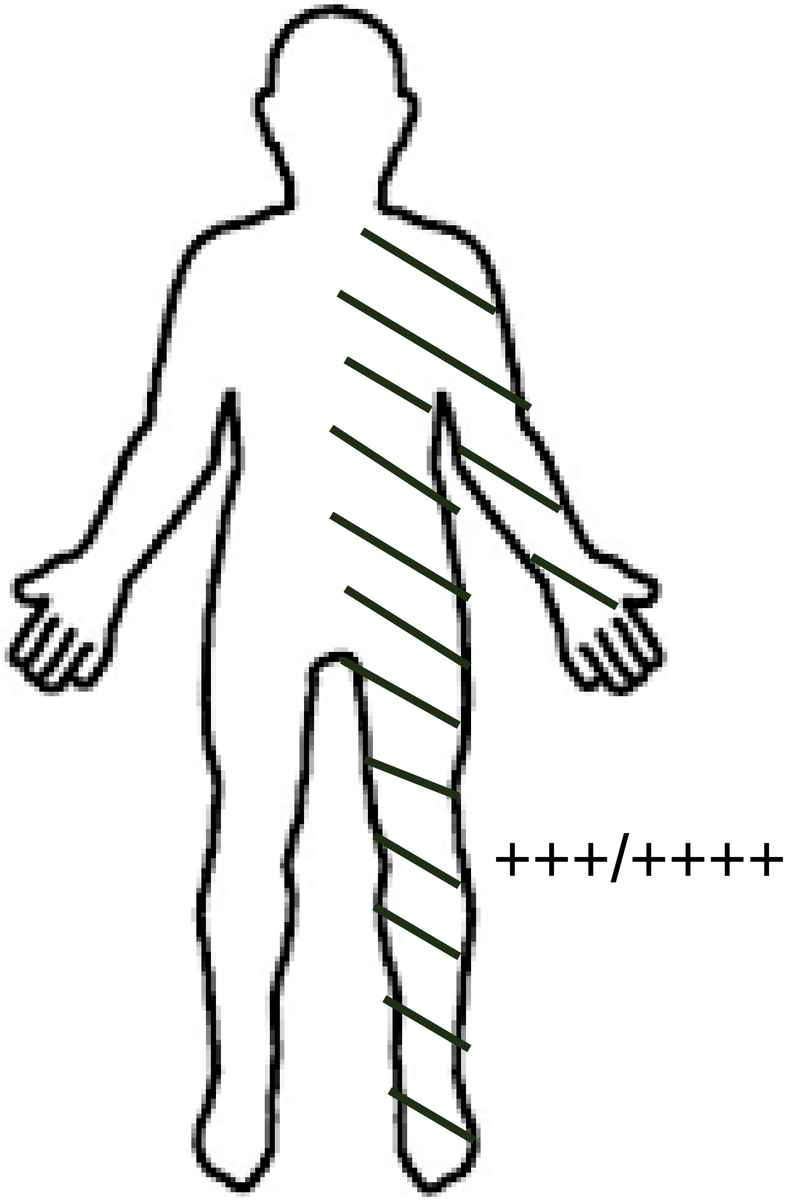
ENFERMEDAD ACTUAL:

- Memoria
- Marcha en miembro inferior izquierdo
- Sensibilidad en hemicuerpo izquierdo
- Cefalea izquierda pulsátil

ANTECEDENTES

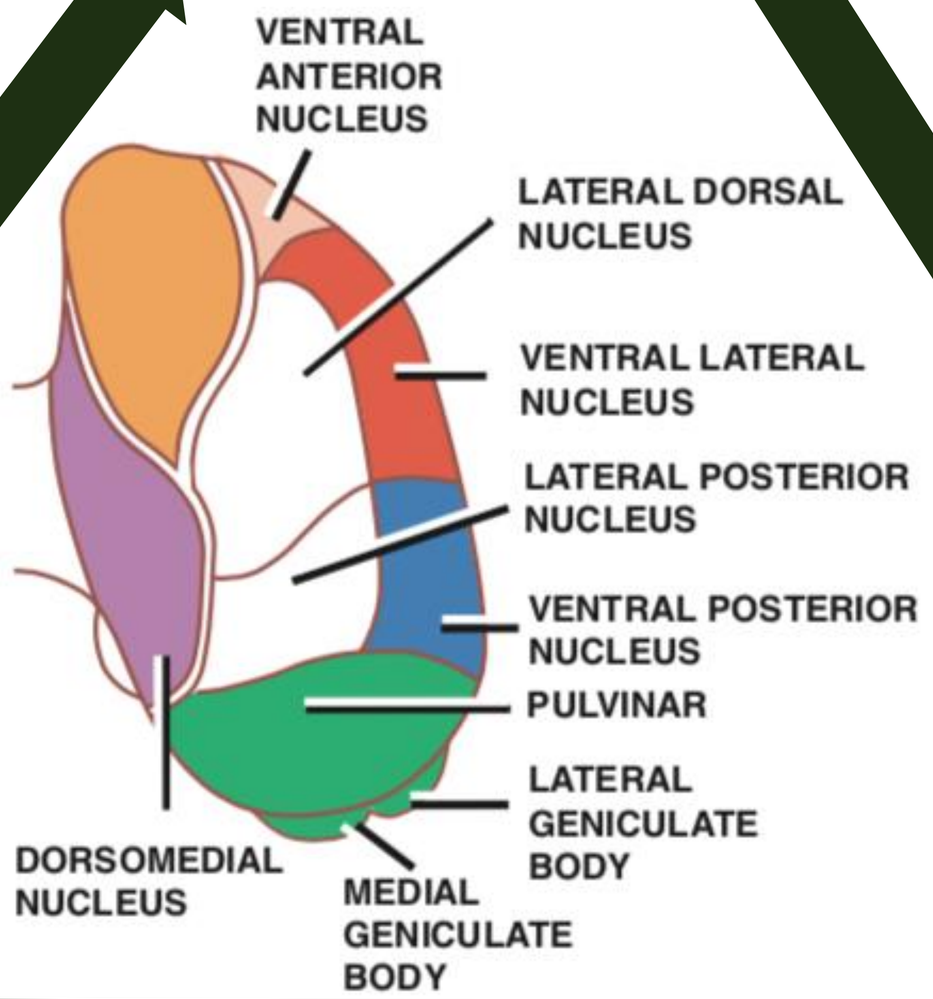
•No refiere

CASO #1 – Examen físico



CASO #1

Amnésico



Hipertensión intracraneal crónica

Sensitivo

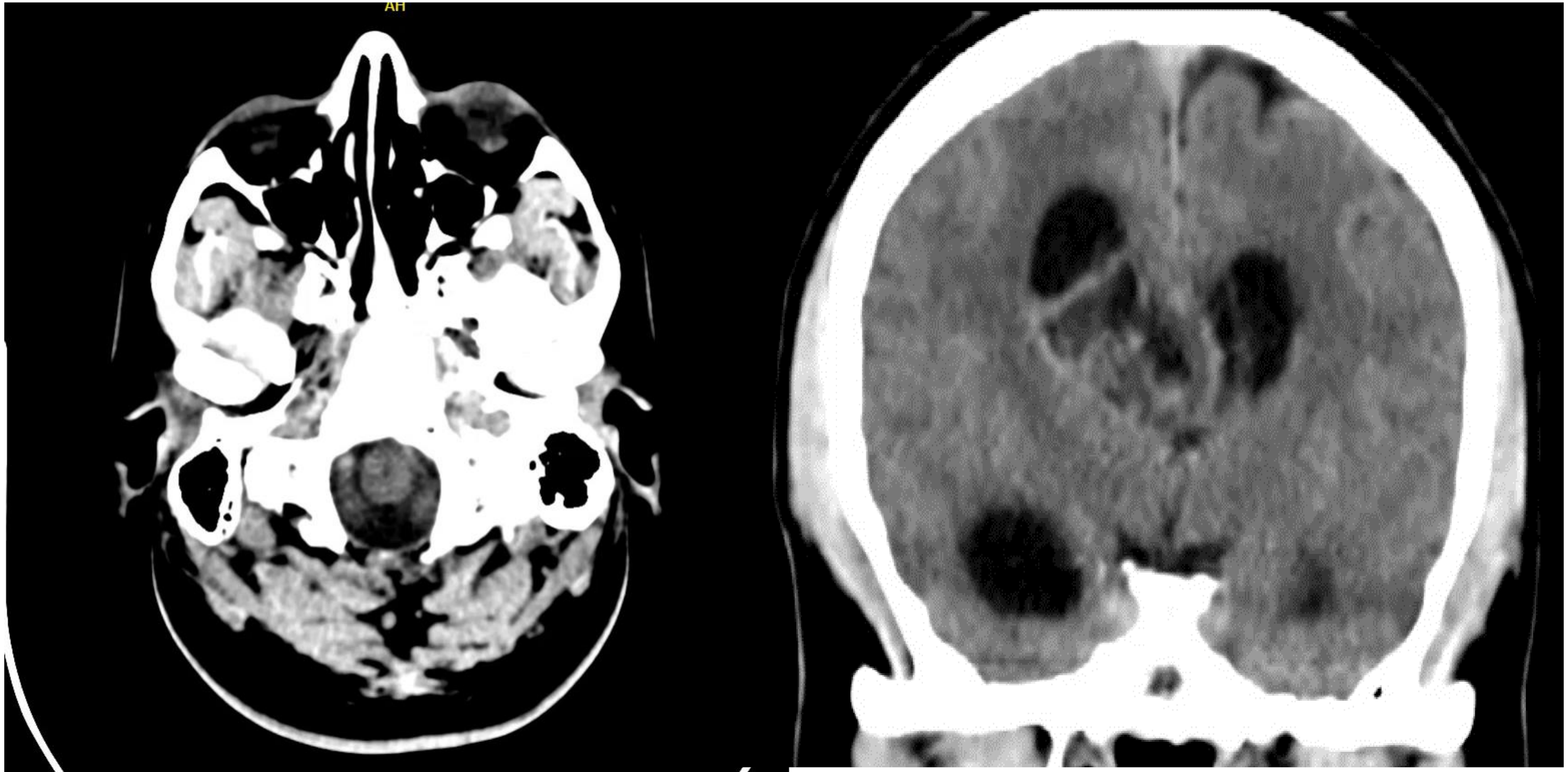
CASO #1

Amnésico

Hipertensión intracraneal crónica

Sensitivo

CASO #1



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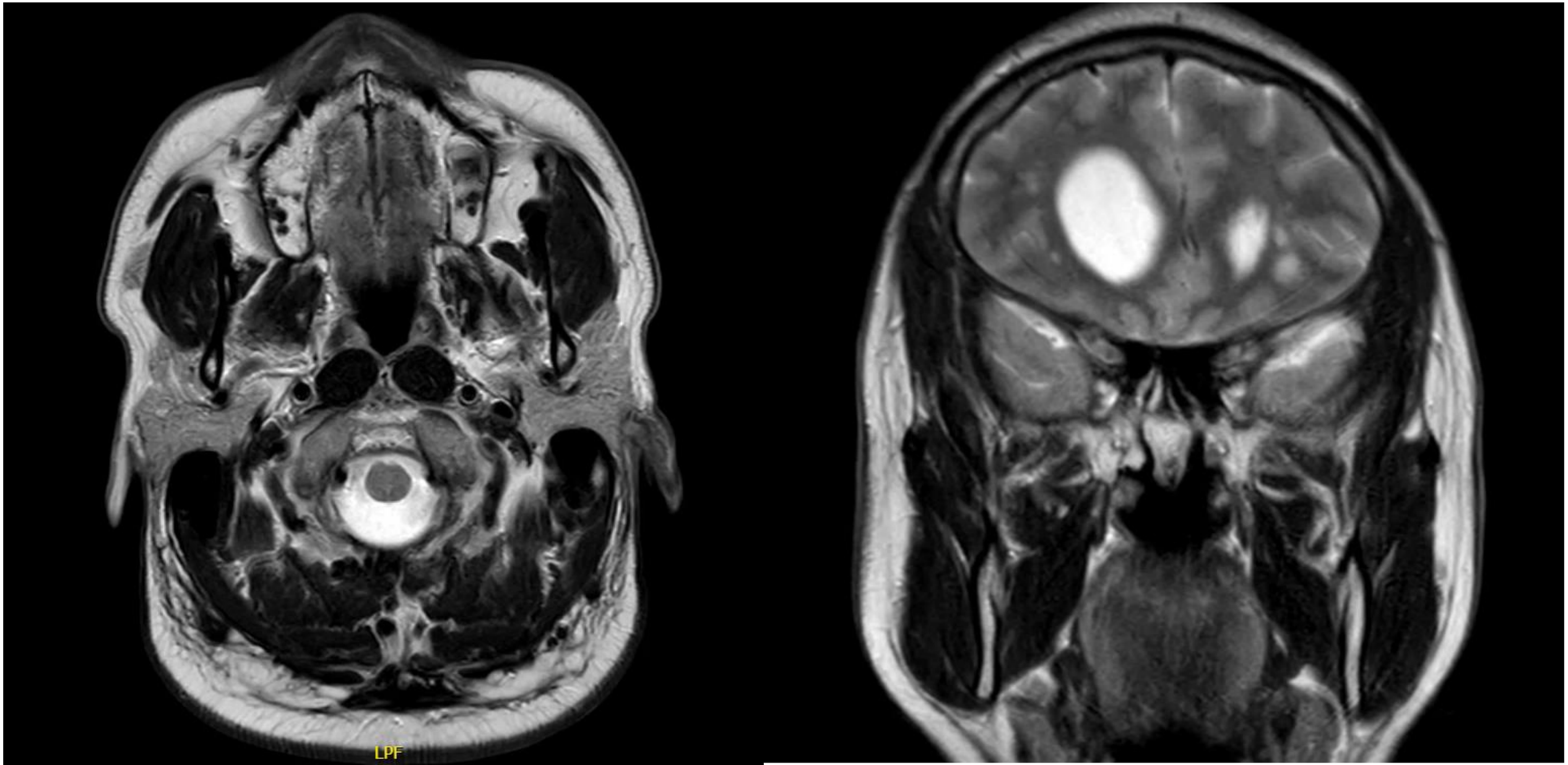
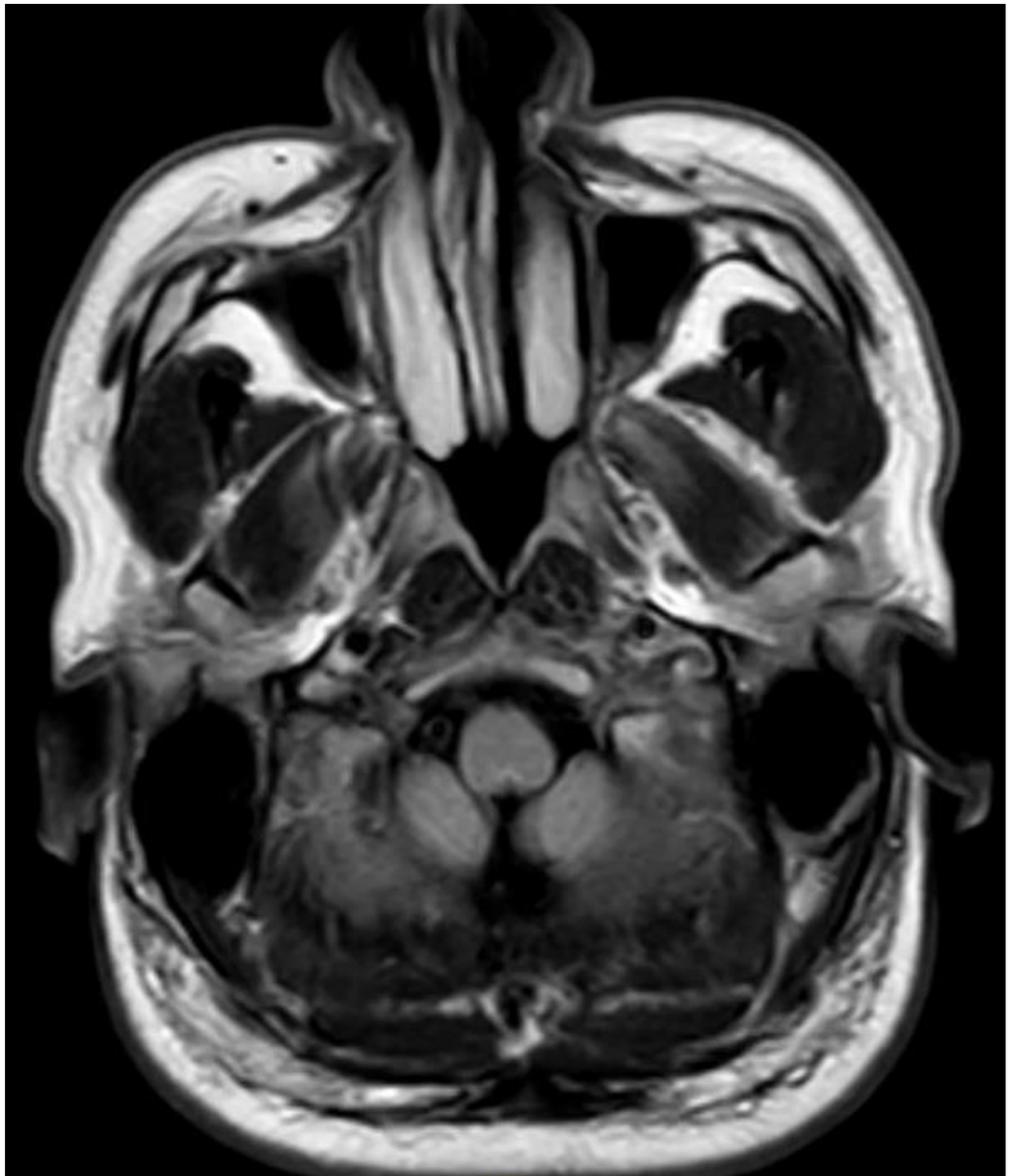
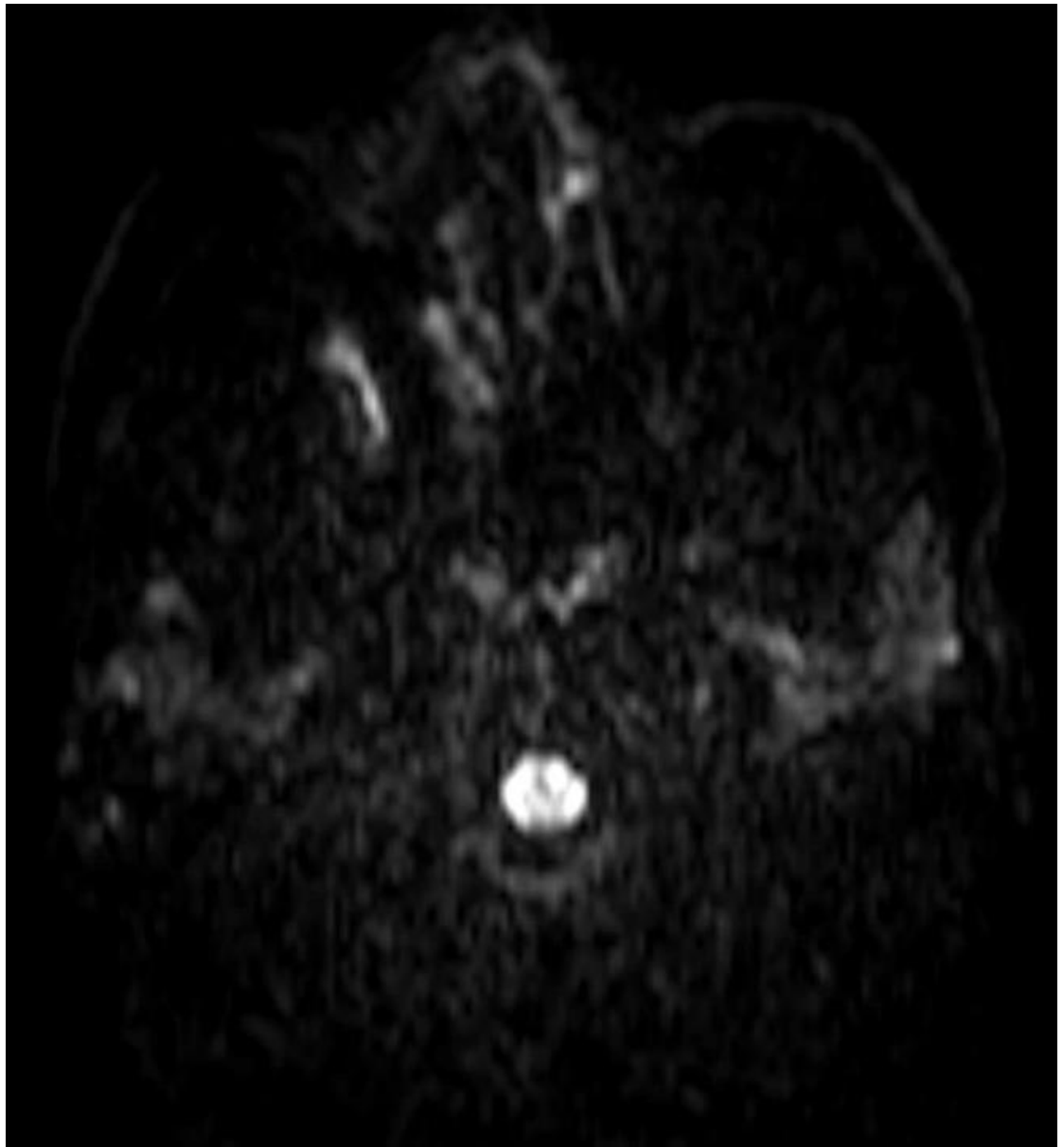
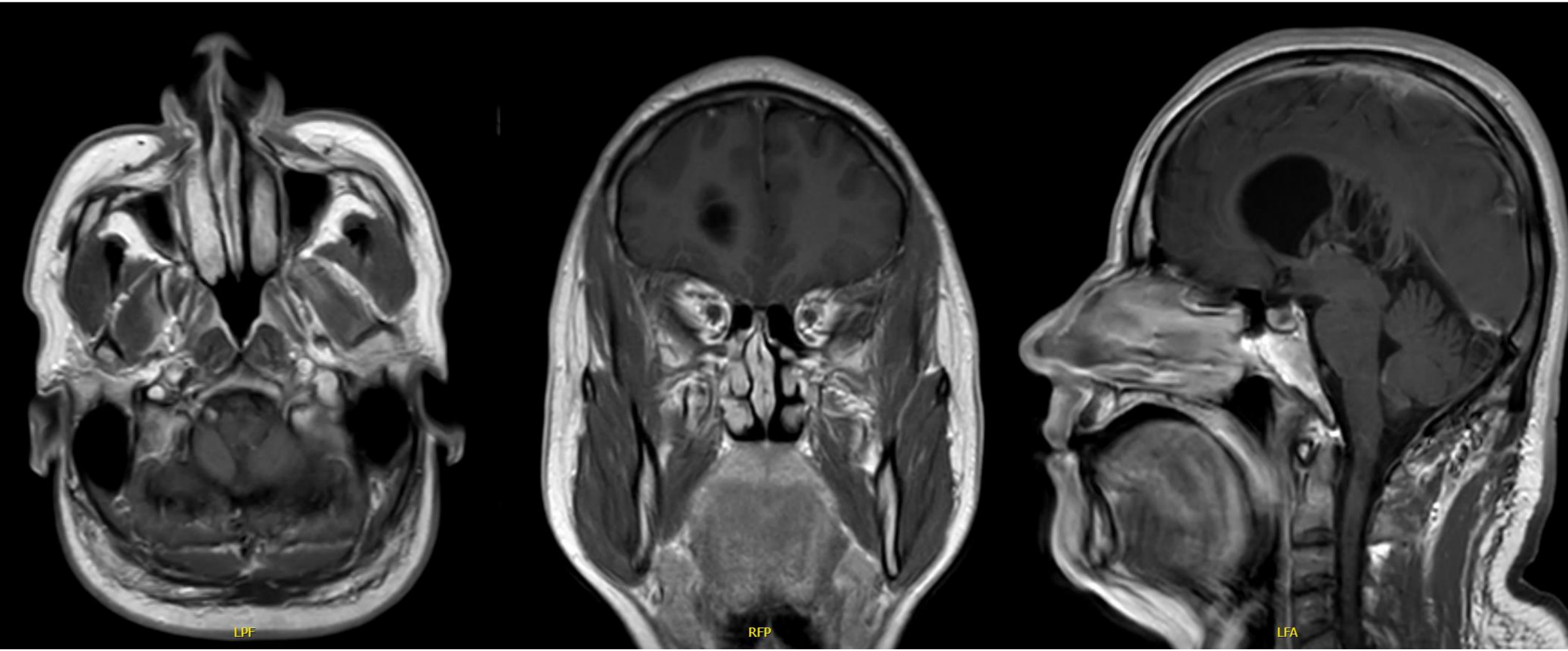


CASO #1

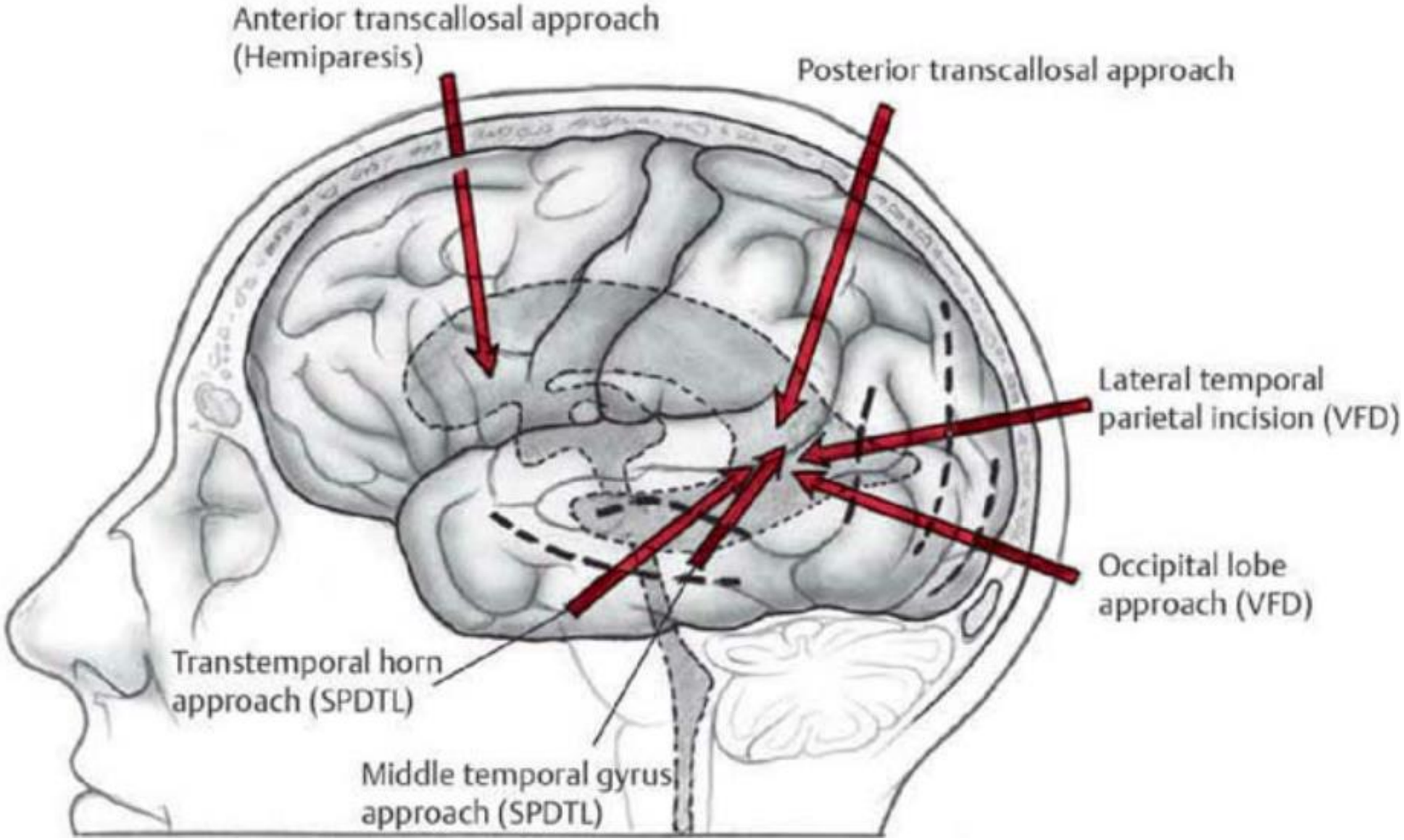




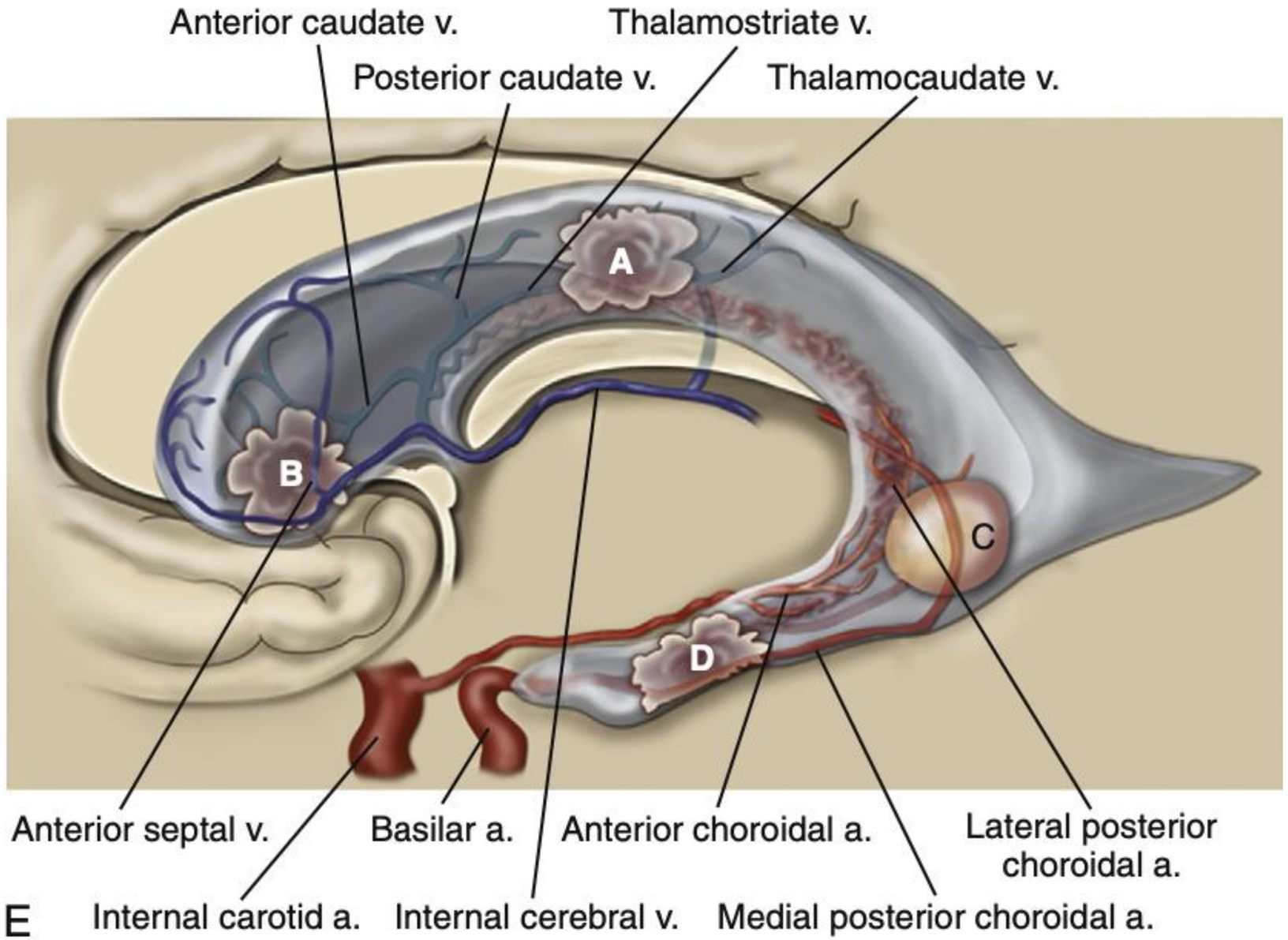
CASO #1



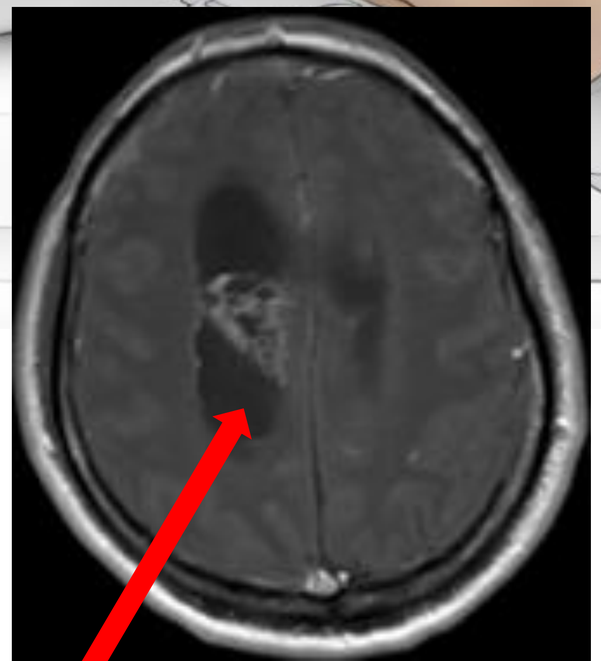
CASO #1 - Abordajes

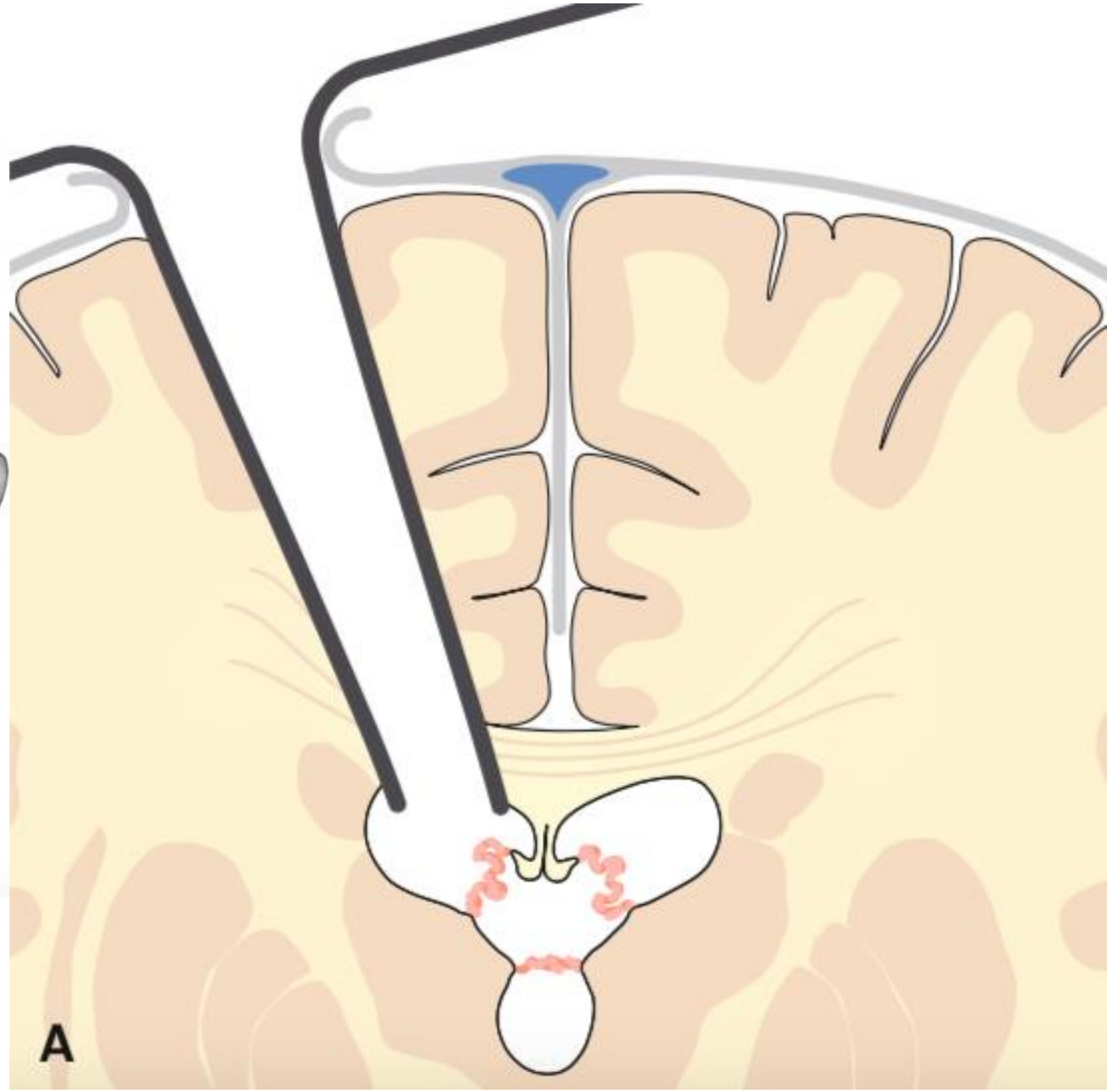


CASO #1 - Anatomía

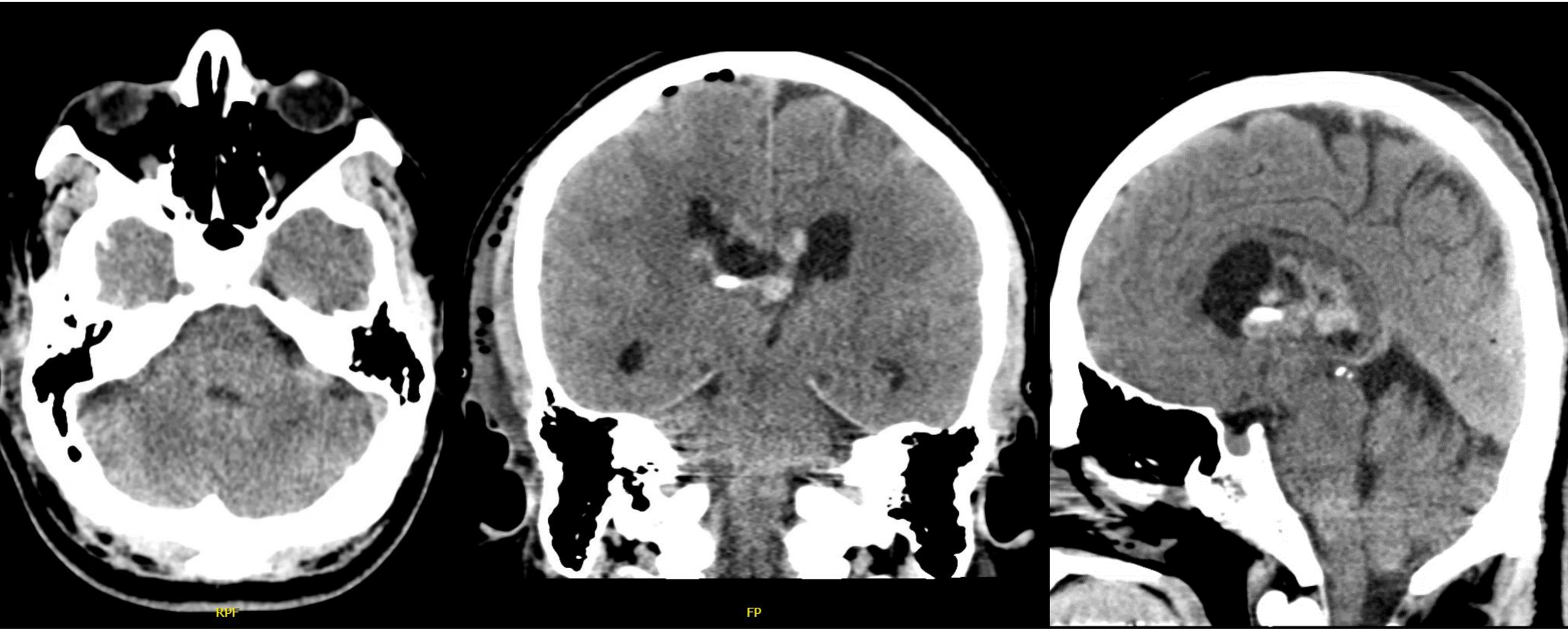


CASO #1 - Cirugía



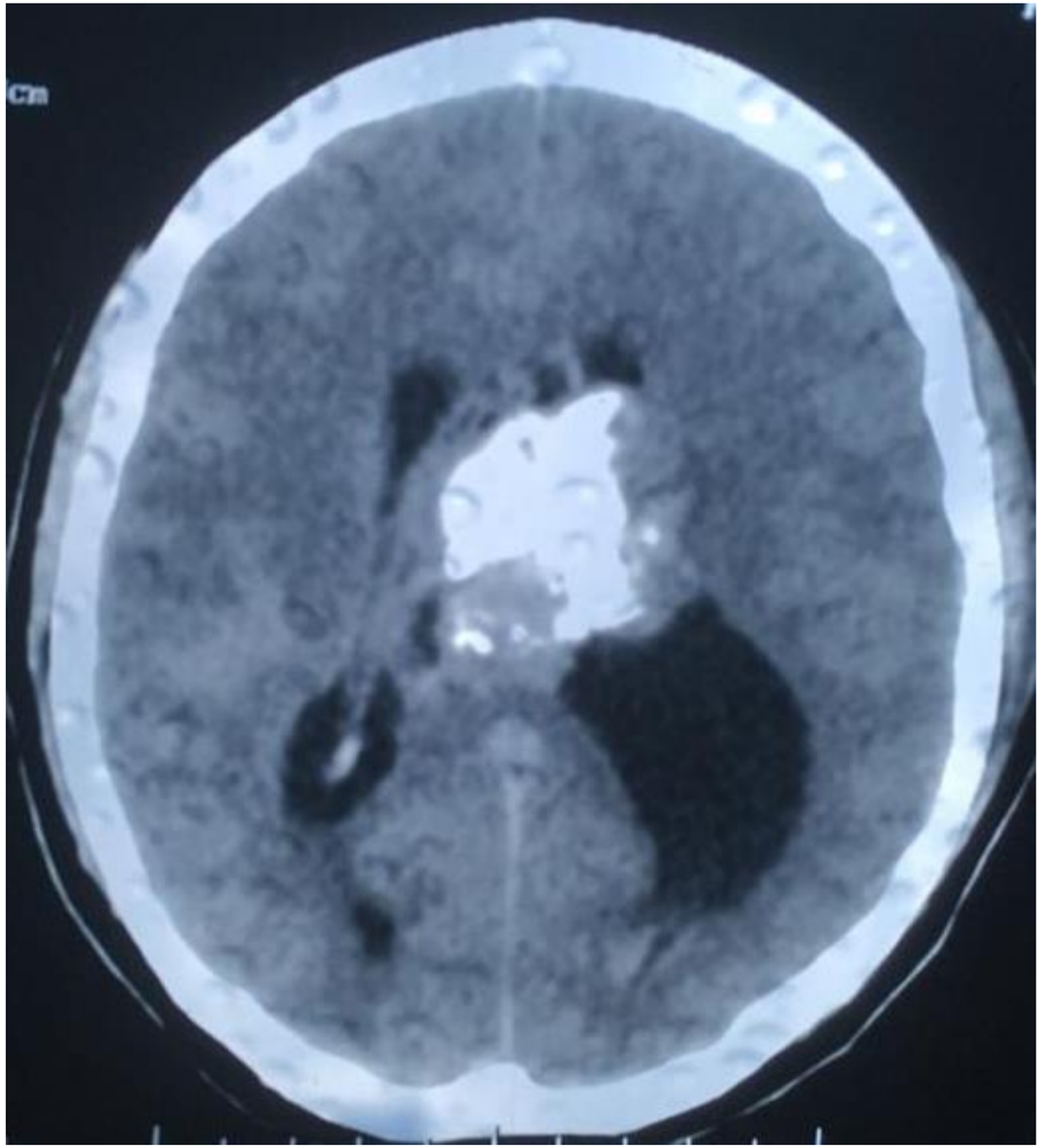


CASO #1 – POP inmediato



CASO #2

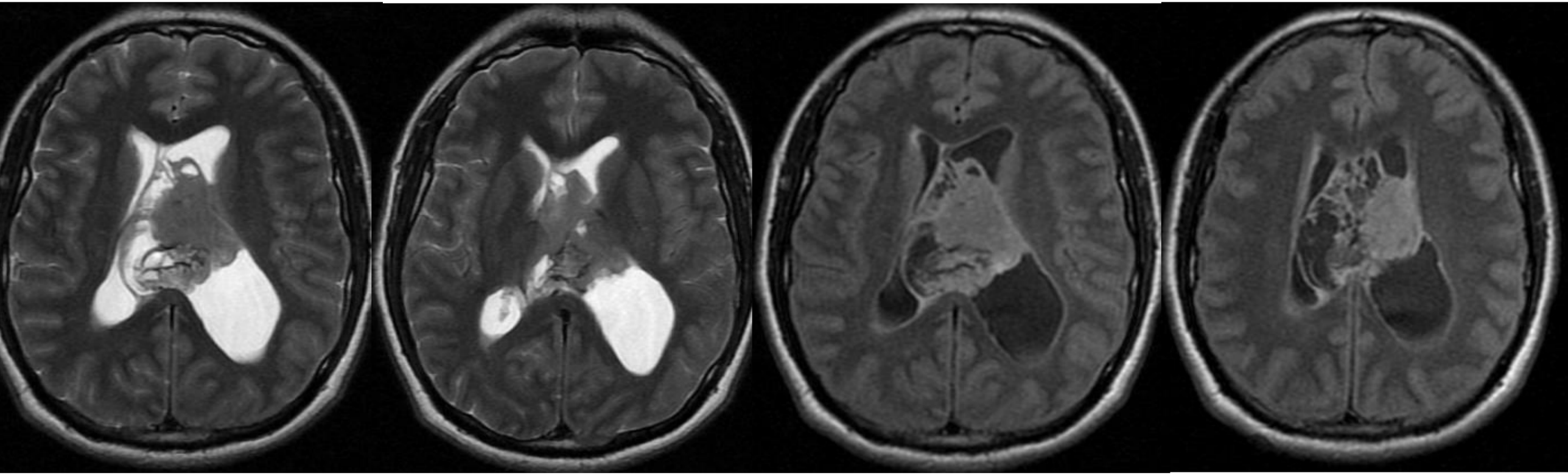
- Hombre
- 39 años
- Lateralidad diestro



ENFERMEDAD ACTUAL:

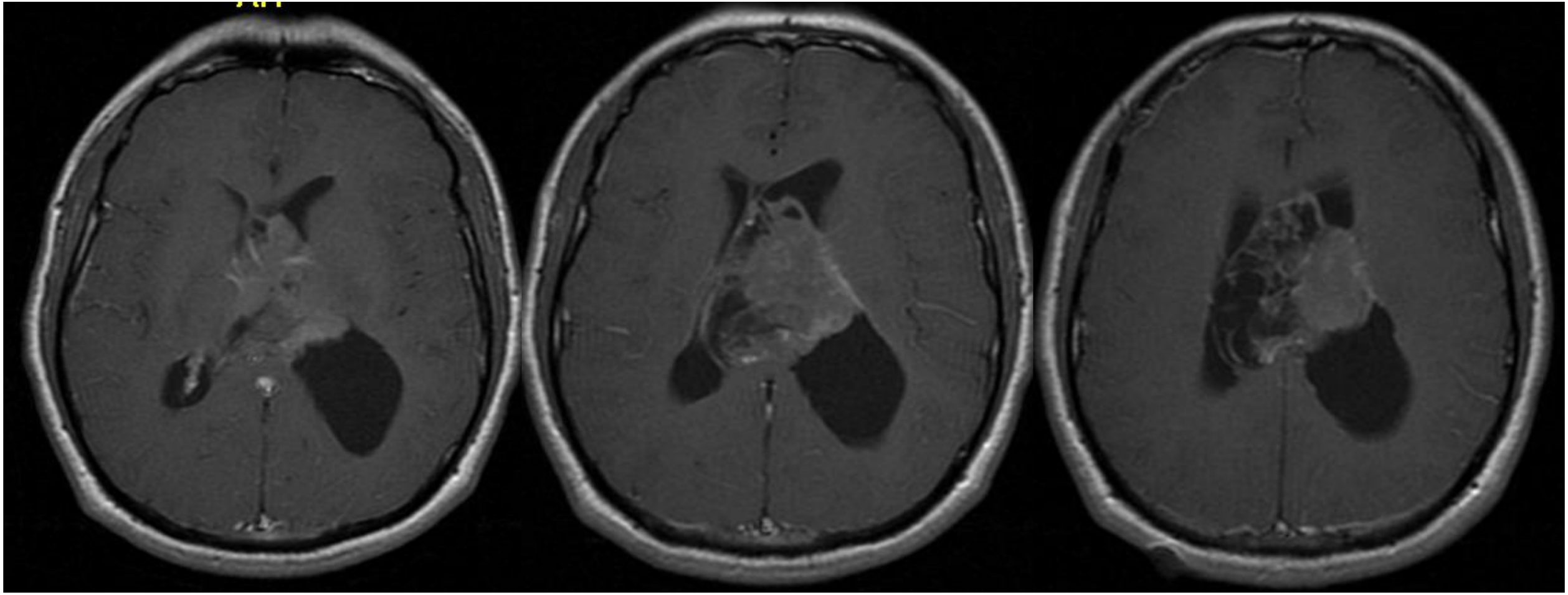
- 2014
- Cefalea crónica progresiva
- Sd hipertesión intracraneal

CASO #2



CASO #2

CASO #2



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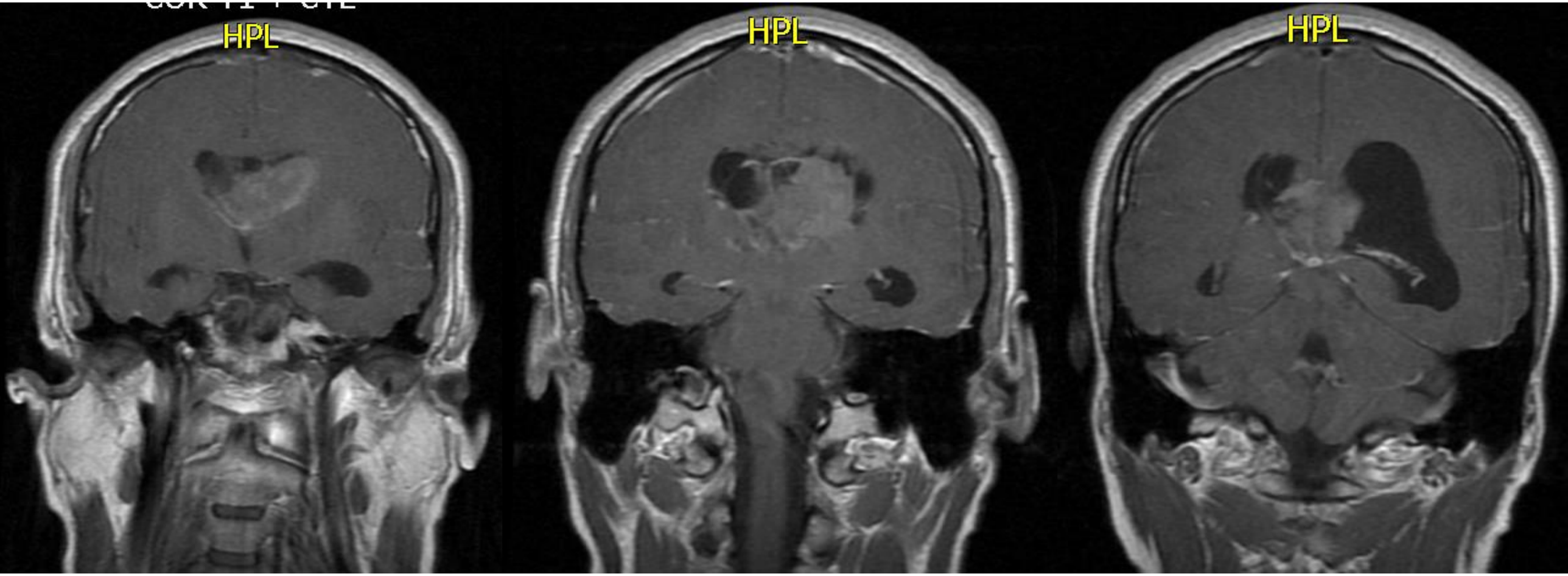
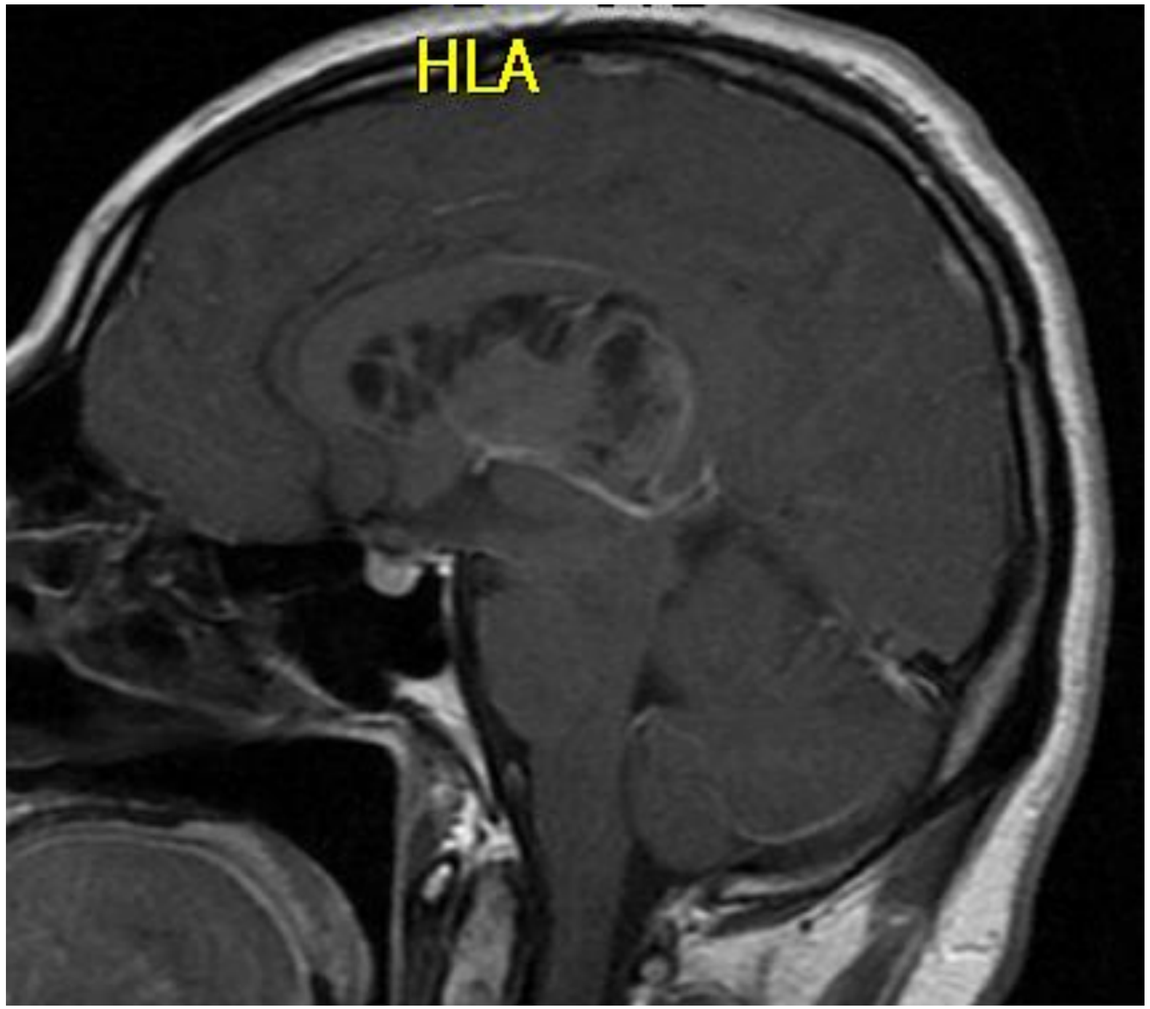


CASO #2



- Biopsia 2014

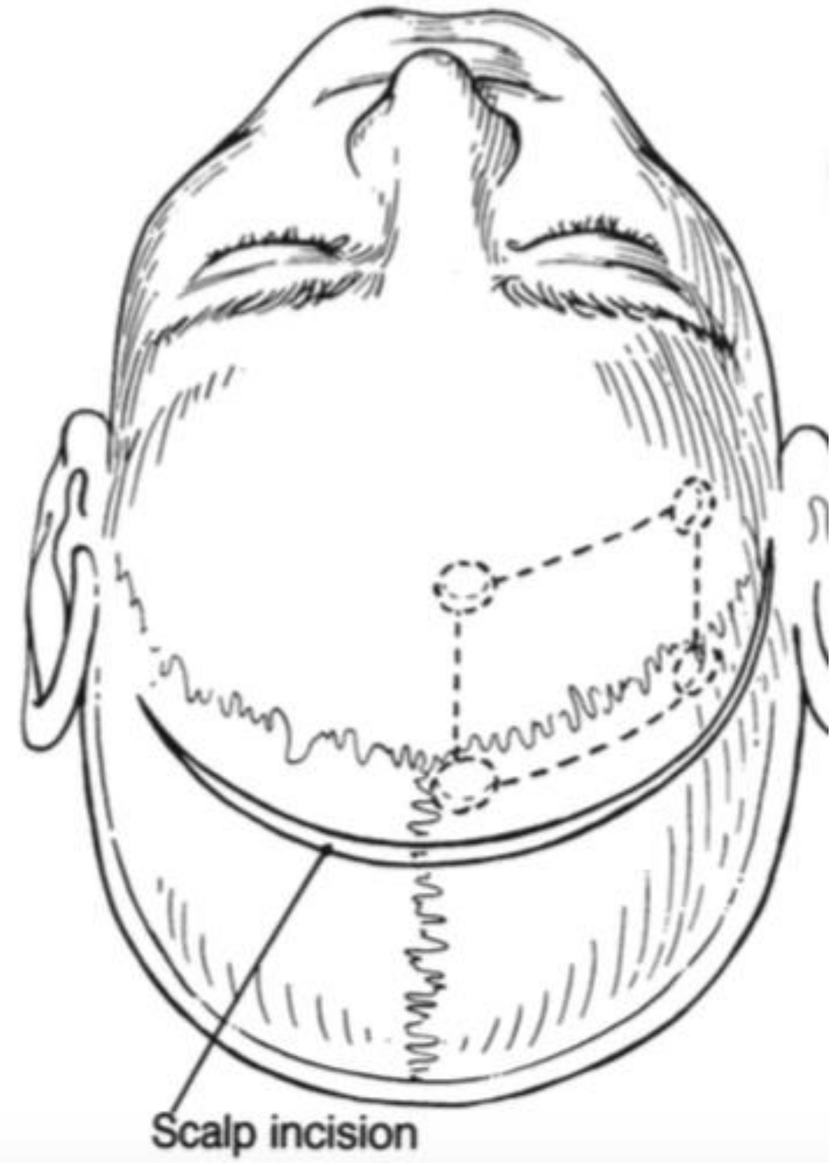
✓ Convulsión
✓ Hemiparesia derecha
✓ Afasia motora

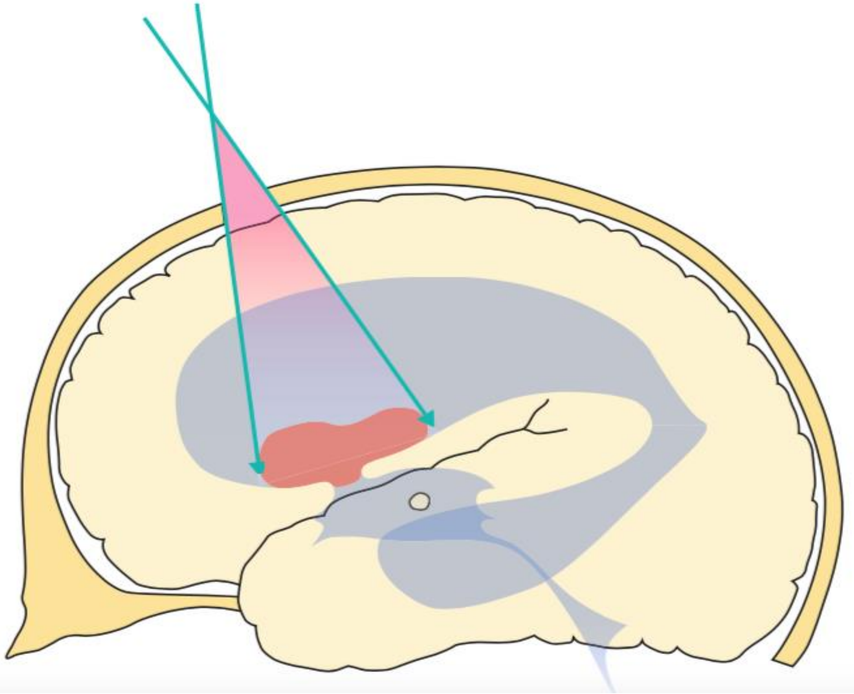
- Radioterapia

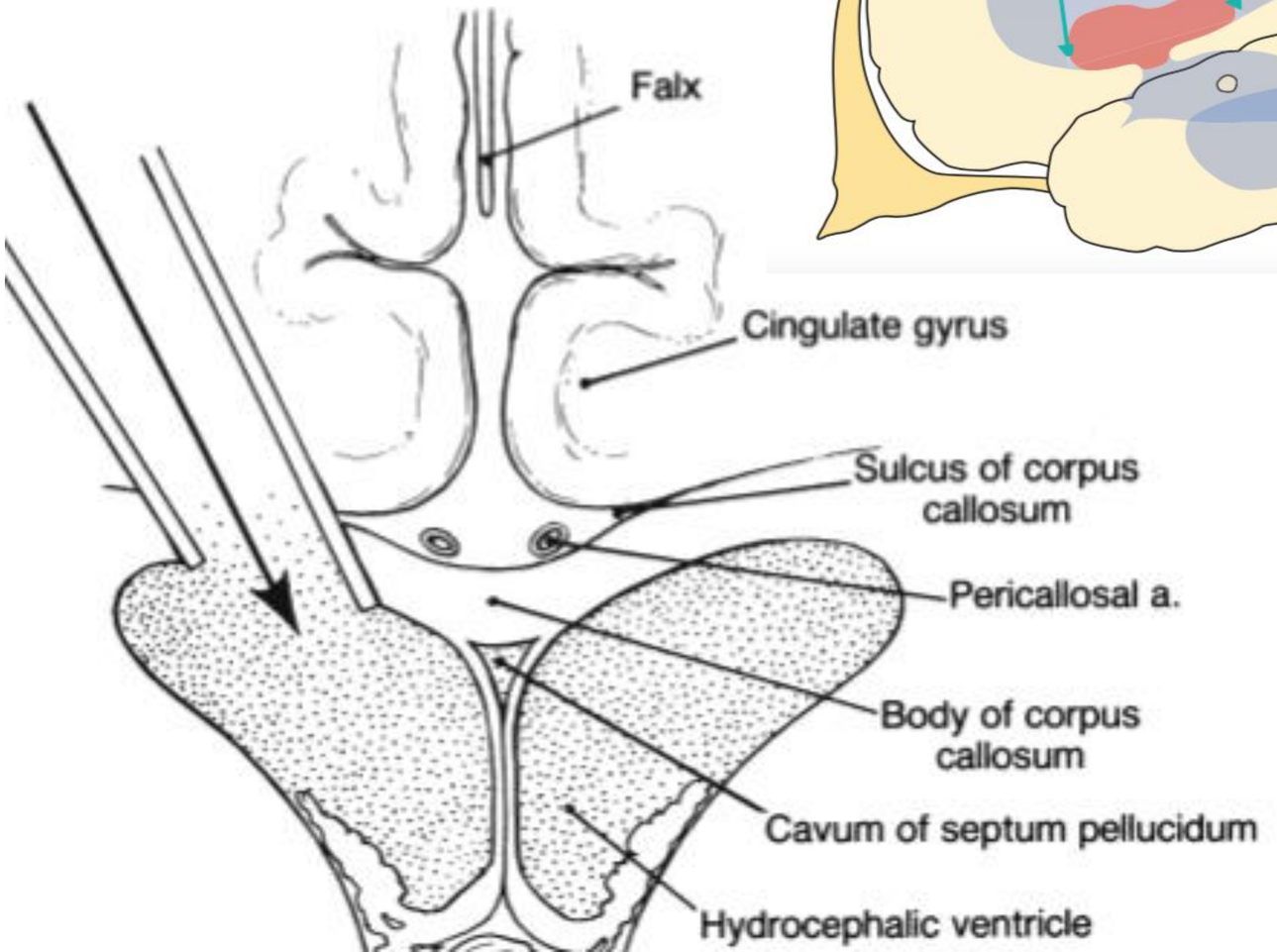
- Enero 2019 - ISO

CASO #2 - Abordaje

- 26/06/2019







CASO #2 – POP inmediato

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REVISIÓN DE TEMA INTERINSTITUCIONAL NEUROCIRUGÍA

JUAN PABLO LEAL ISAZA. RESIDENTE SEGUNDO AÑO
PIERRE-YVES FONSECA MAZEAU. RESIDENTE PRIMER AÑO

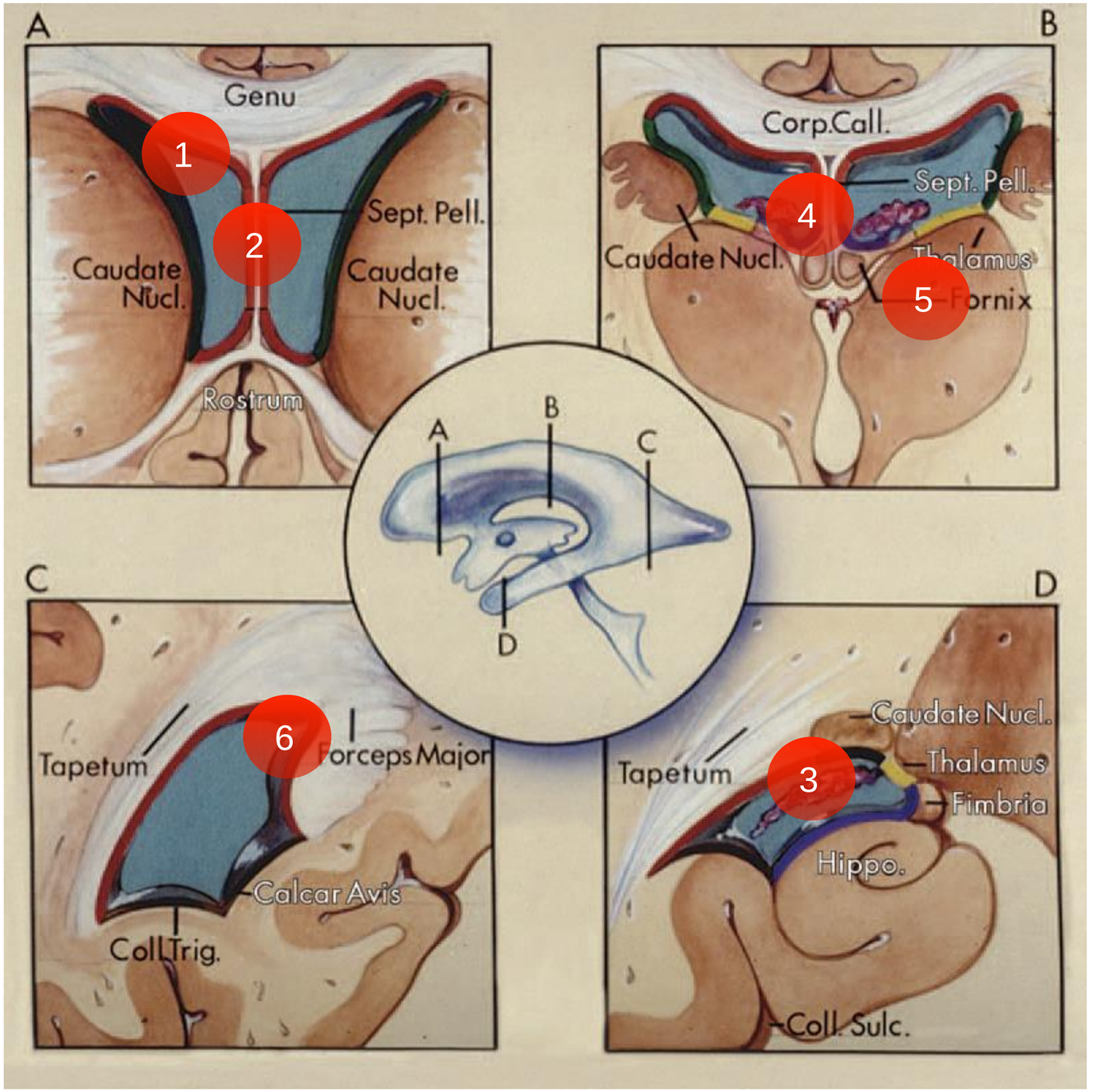
UNIVERSIDAD EL BOSQUE

Acreditación Institucional ALTA CALIDAD otorgada por el MEN

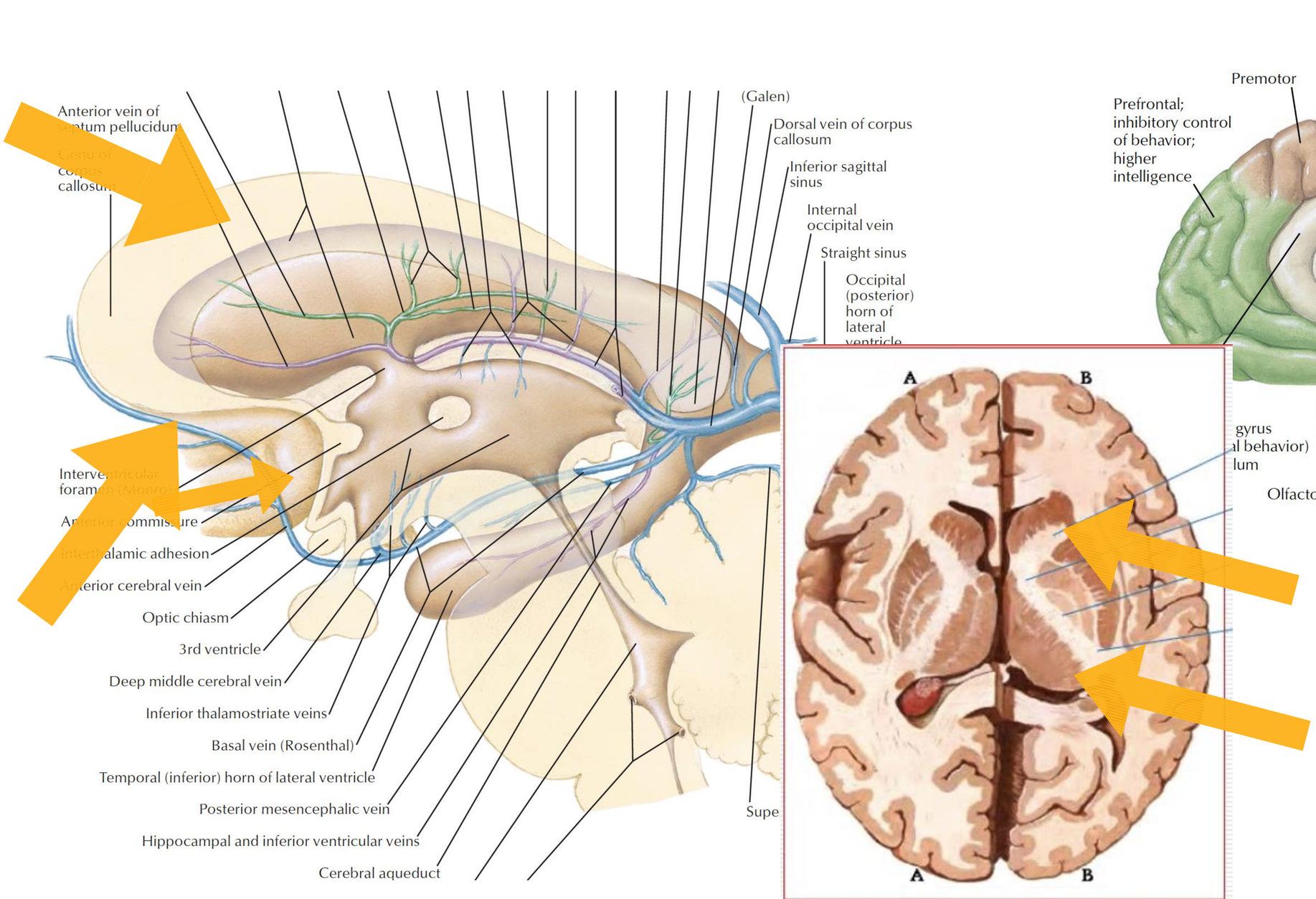
COORDINACION:
DR. JORGE HUMBERTO ARISTIZABAL MAYA
DR. SANTIAGO VALLEJO PUERTA

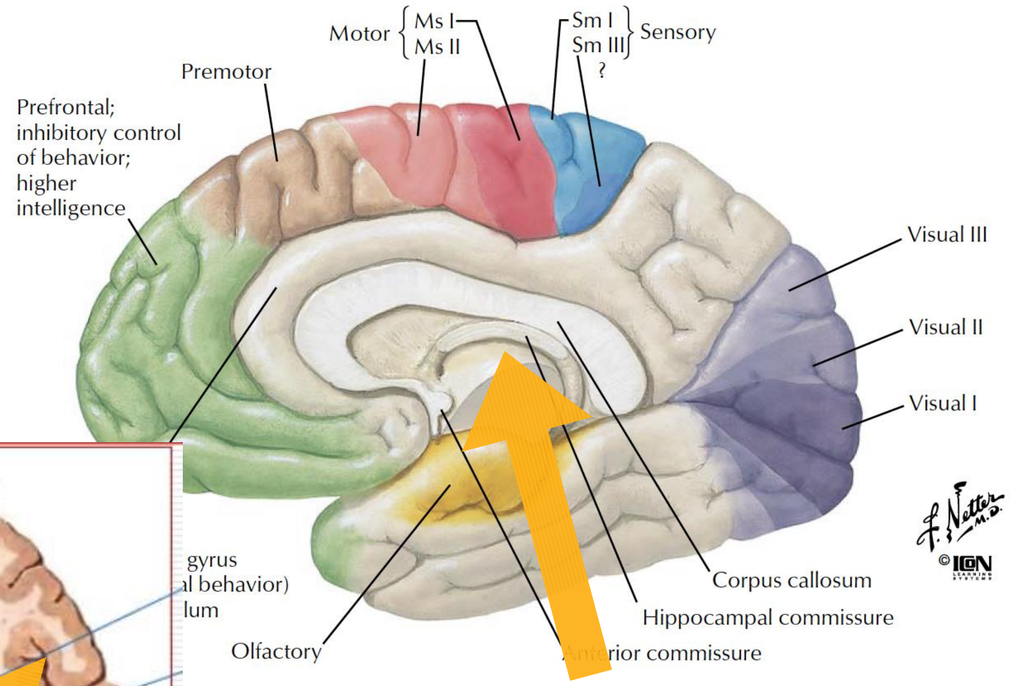
LESIONES INTRAVENTRICULARES

¿DE DÓNDE VIENEN?



LÍMITES ANATÓMICOS



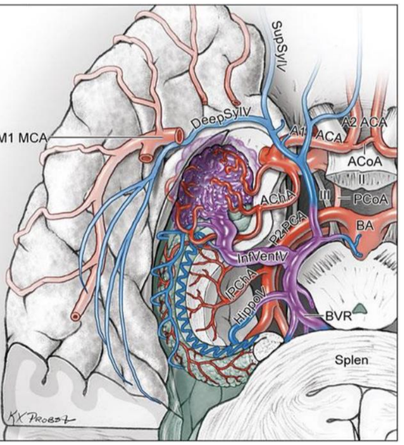


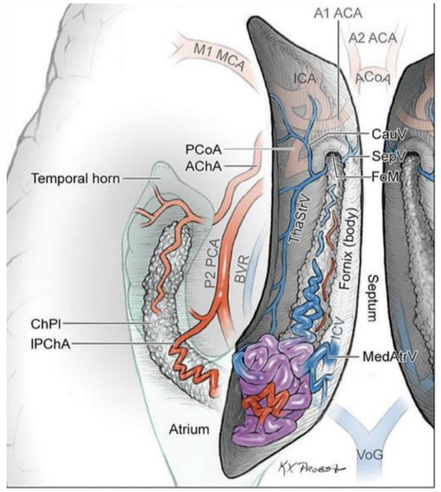
¿QUÉ TIPO DE LESIONES ENCONTRAMOS?

LESIONES VASCULARES

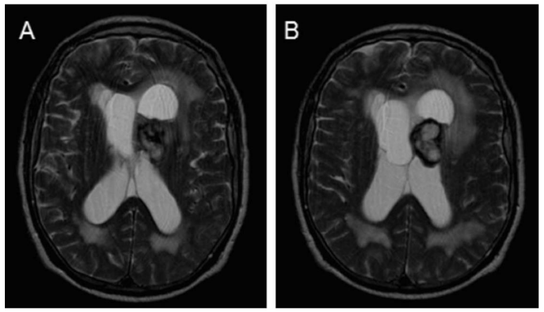
MALFORMACIONES

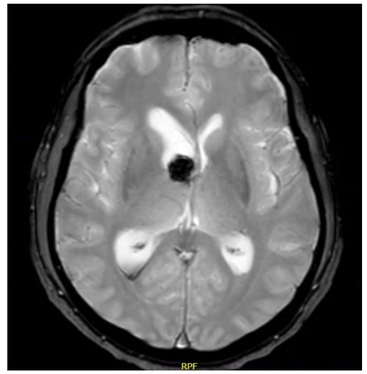
MAV

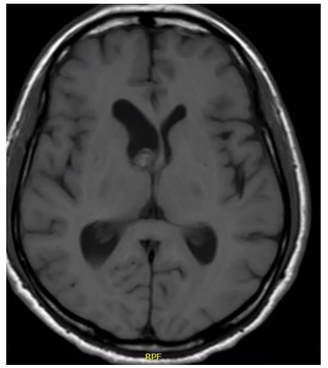




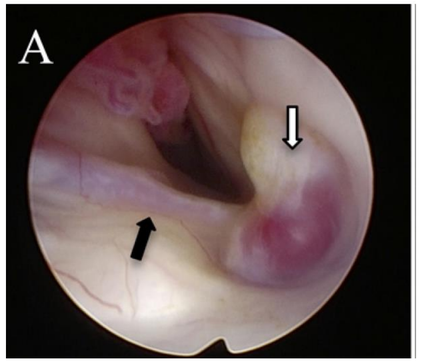
CAVERNOMAS

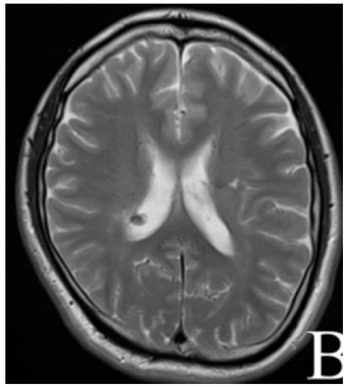






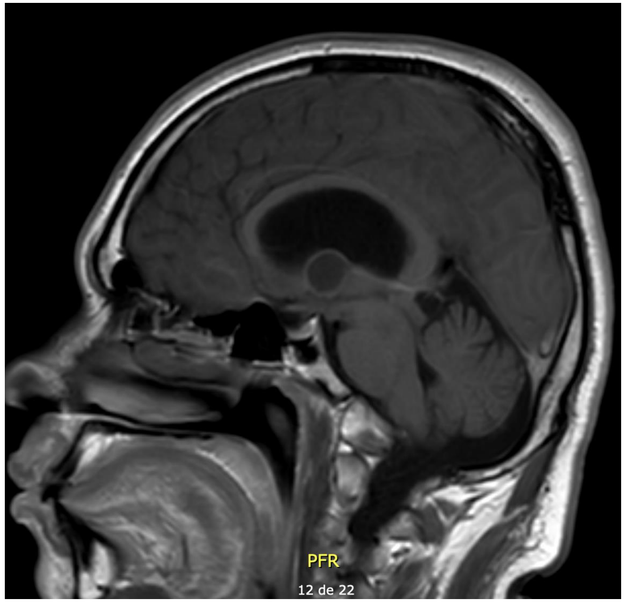
ANEURISMÁTICAS



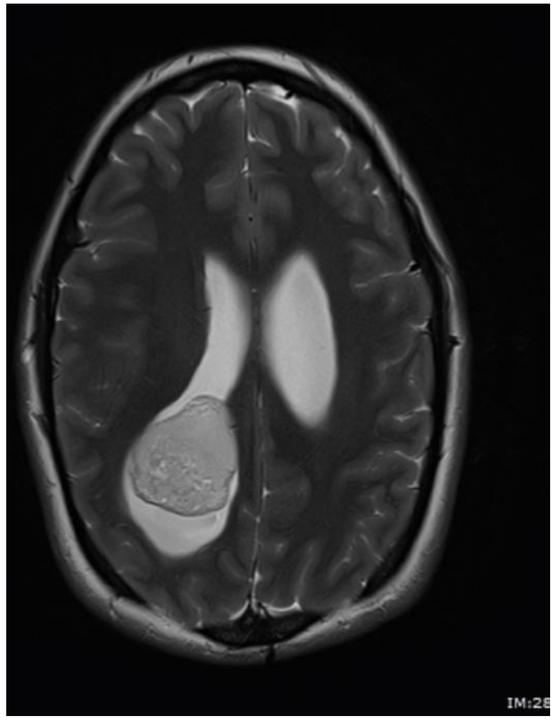


QUÍSTICAS

QUISTES COLOIDES



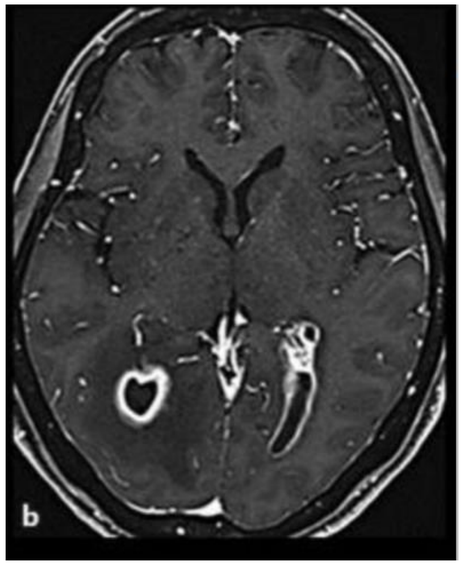
QUISTE EPIDERMOIDE

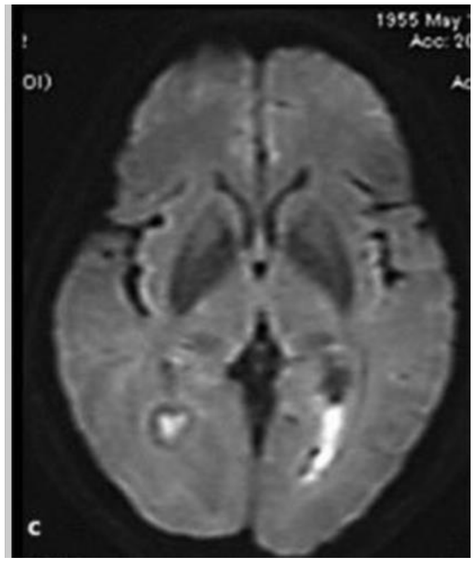


QUISTES PLEXOS COROIDEOS

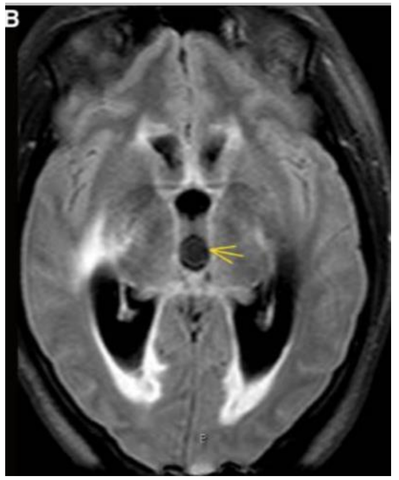
INFECCIOSAS

ABSCESOS



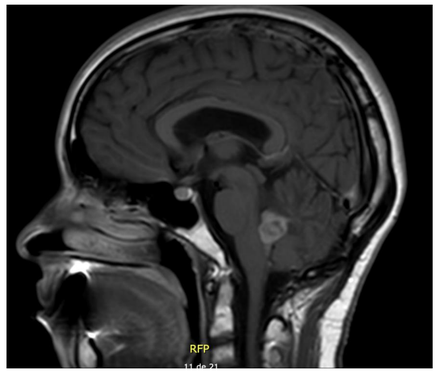


NEUROCISTICERCOSIS

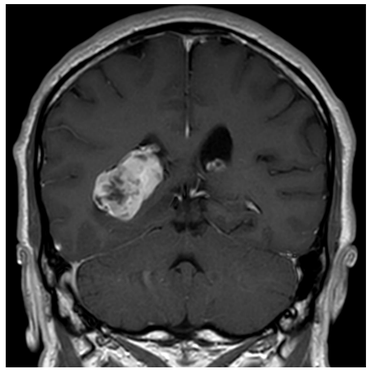


NEOPLASIAS SÓLIDAS

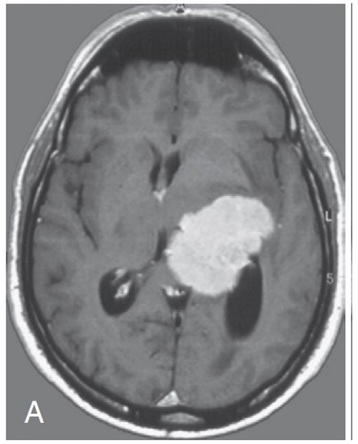
EPENDIMOMAS



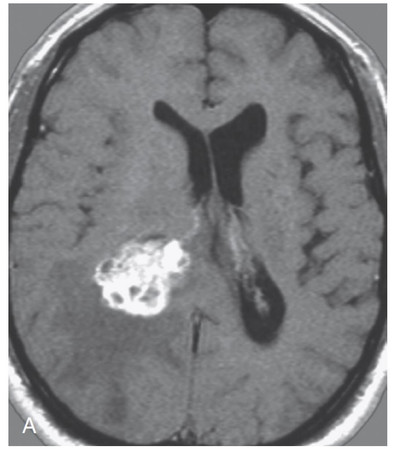
GLIALES



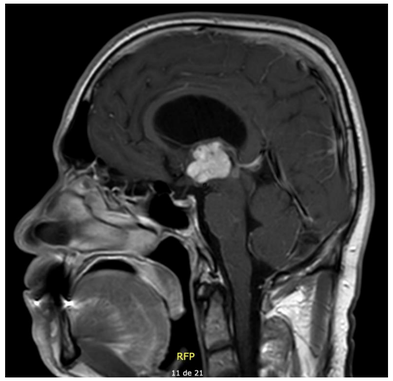
MENINGIOMAS



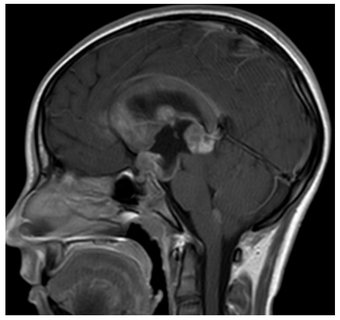
PAPILOMA PLEXOS COROIDEOS

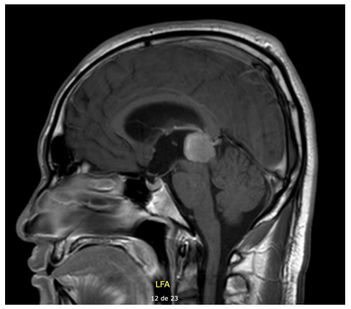


CRANEOFARINGIOMAS

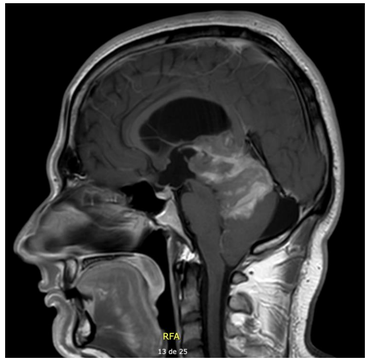


PINEAL

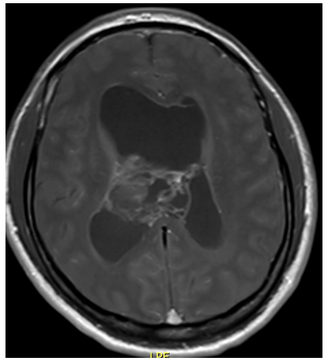




MEDULOBLASTOMA



NEUROCITOMA



HISTOLOGY	*n*
Colloid cyst	19
Craniopharyngioma	16
Pilocytic astrocytoma	15
Pineocytoma (WHO grade I)	9
Cavernous malformation	8
Medulloblastoma	8
Metastatic tumor	7
Glioblastoma	6
Pineal cyst	6
Subependymoma	5
Fibrillary astrocytoma	4
Anaplastic ependymoma	3
Meningioma	4
Central neurocytoma	3
Pineocytoma (WHO grade II)	3
Anaplastic astrocytoma	2
Dermoid cyst	2

Gliosis	2
Hemangioblastoma	2
Lymphoma	2
Neurenteric cyst	2
Pineoblastoma	2
Pituitary adenoma	2
Chordoid glioma	1
Gliosarcoma	1
Granular cell tumor	1
Plexus papilloma	1
Anaplastic plexus papilloma	1
Germinoma	1
Teratoma	1

¿CÓMO ABORDAR Y ORIENTARNOS EN LA LESIONES INTRAVENTRICULARES PASO A PASO?

INICIEMOS

1

PRESENTACIÓN CLÍNICA

- DÉFICIT PARES BAJOS-NISTAGMUS
- CEFALEA HIPERTENSIÓN INTRACRANEANA
- ALTERACIONES ENDOCRINOLÓGICAS
- DÉFICIT VISUAL
- PARINAUD
- FIEBRE
- INICIO SÚBITO
- HEMIPARESIA/MEMORIA

DÉFICIT DE PARES BAJOS

CUARTO VENTRÍCULO

- EPENDIMOMAS
- MEDULOBLASTOMAS
- ASTROCITOMA PILOCÍTICO
- HEMANGIOBLASTOMA
- CISTICERCO

HIPERTENSIÓN INTRACRANEANA

¿TODAS?

ENDOCRINOLÓGICAS / DÉFICIT VISUAL

TERCER VENTRÍCULO

CRANEOFARINGIOMAS

ADENOMAS HIPOFISIARIOS

TERCER VENTRÍCULO

QUISTES, LESIONES SELARES CON EXTENSIÓN SUPRASELAR HACIA TERCER VENTRÍCULO COMPRESIÓN QUIASMA

VENTRÍCULOS LATERALES

PARAVENTRICULARES ADYACENTES A RADIACIONES ÓPTICAS

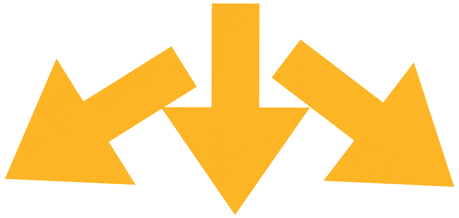
PARINAUD

- PARÁLISIS MIRADA VERTICAL
- NISTAGMUS CONVERGENCIA
- RETRACCIÓN PALPEBRAL
- ALTERACIÓN MOVIMIENTOS OCULARES CONJUGADOS
- PAPILEDEMA
- DISOCIACIÓN PUPILAR FOTOMOTORA

LESIONES QUE GENEREN HIDROCEFALIA

COMPRESIÓN DEL TECTUM MESCENCEFÁLICO

COMPRESIÓN COLÍCULOS SUPERIORES



TUMORES DE LA REGIÓN PINEAL

TUMORES DE EL CUARTO VENTRÍCULO

QUISTES INFECCIOSOS DE EL 4 VENTRÍCULO

FIEBRE

¿ABSCESO-VENTRICULITIS?

INICIO SÚBITO

VASCULARES

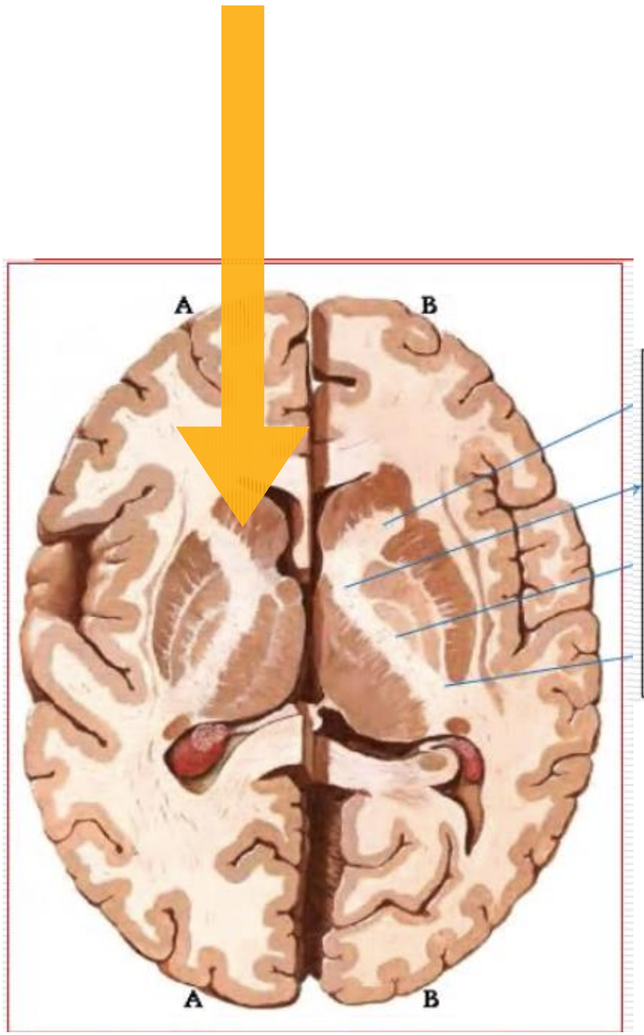
TUMORES QUE GENEREN HIDROCEFALIA

HEMORRAGIA INTRAPARENQUIMATOSA O SUBARACNOIDEA CON EXTENSIÓN VENTRICULAR

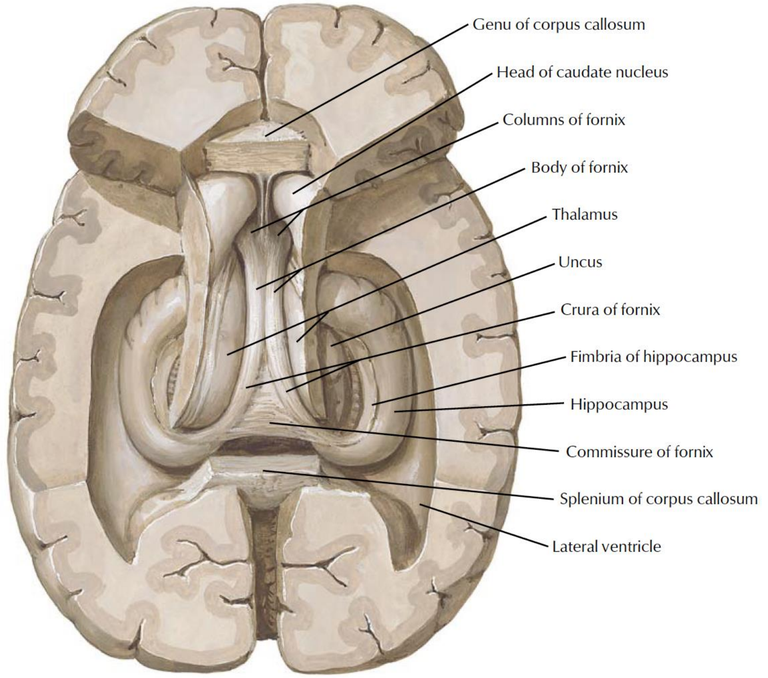
MALFORMACIONES

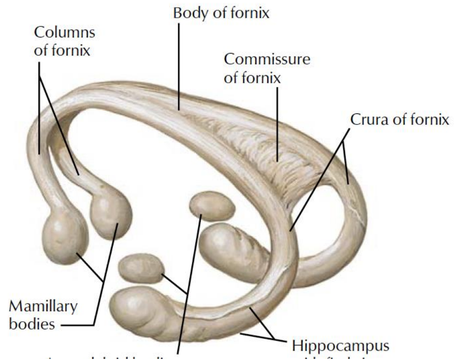
ANEURISMAS

HEMIPARESIA/ALTERACIÓN DE LA MEMORIA



- R. T. Anteriores
- R. T. Medias
- R.T. Posteriores
- R. T. Inferiores





2

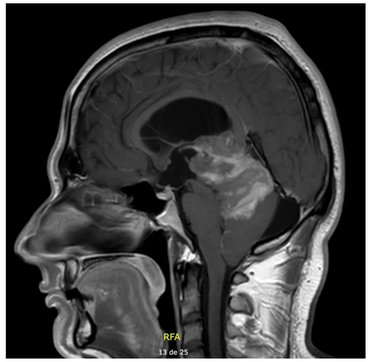
EDAD

NIÑO

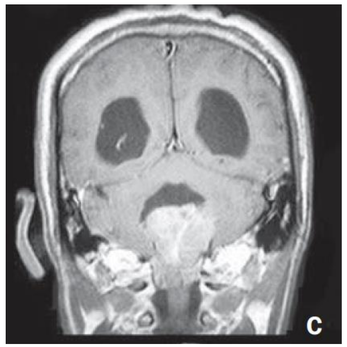
ADULTO

INFANTES Y ESCOLARES

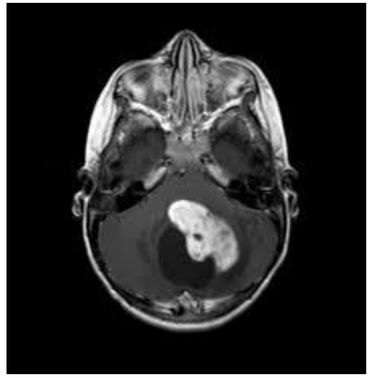
MEDULOBLASTOMA



EPENDIMOMA



ASTROCITOMA PILOCÍTICO



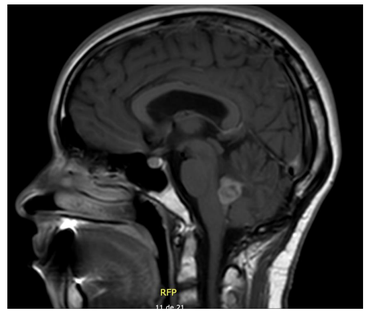
CRANEOFARINGIOMA

PAPILOMA DE PLEXOS CONOIDEOS

ASTROCITOMA SUBEPENDIMARIO DE CÉLULAS GIANTES

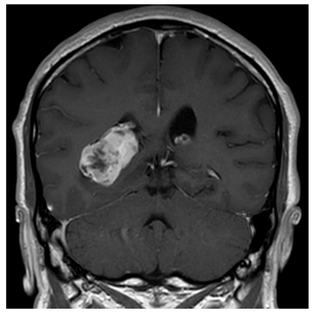
ADULTO

SUBEPENDIMOMA *EPENDIMOMA*

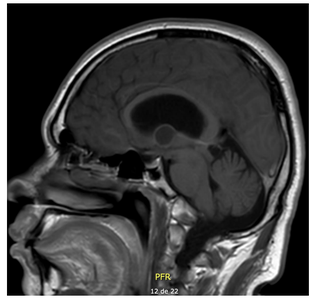


MENINGIOMA

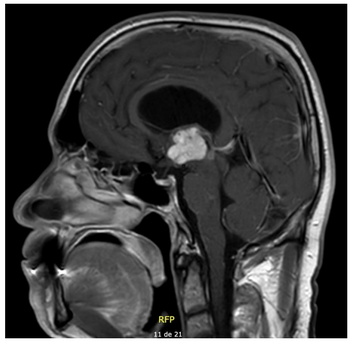
GLIALES DE ALTO GRADO



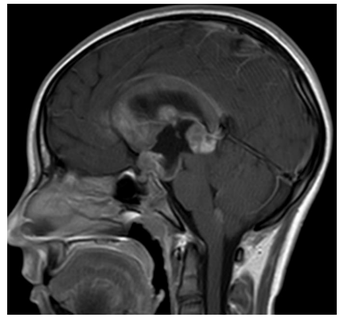
QUISTE COLOIDE



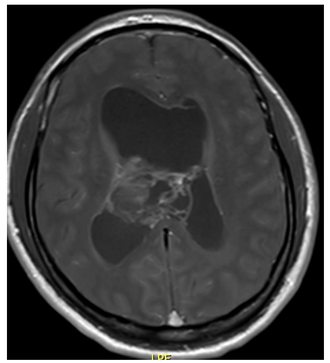
CRANEOFARINGIOMAS



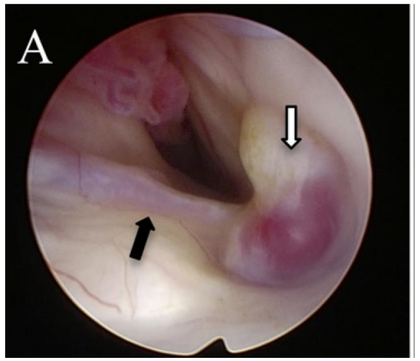
GERMINOMAS



NEUROCITOMA CENTRAL



VASCULARES



3

SEXO

HOMBRE

MUJER

HOMBRES

TUMORES DE LA REGIÓN PINEAL
3:1

SUBEPENDIMOMAS
2.3:1

EPENDIMOMAS
2.5:1.5

GLIOMAS ALTO GRADO
1.3:1

QUISTE COLOIDE
1.5:1

CRANEOFARINGIOMA
IGUAL

NEUROCITOMA
IGUAL

MUJERES

MENINGIOMA
3:1

MALFORMACIONES ARTERIOVENOSAS
2.5:1.5

CAVERNOMAS
2.6:2.5

QUISTE DERMOIDE
1.2:1

PAPILOMA PLEXO COROIDEO
53%-47%

1.5:1

GLIOMAS COROIDEOS
2:1

CRANEOFARINGIOMA
IGUAL

NEUROCITOMA
IGUAL

4

LOCALIZACIÓN

VENTRÍCULOS LATERALES

TERCER VENTRÍCULO

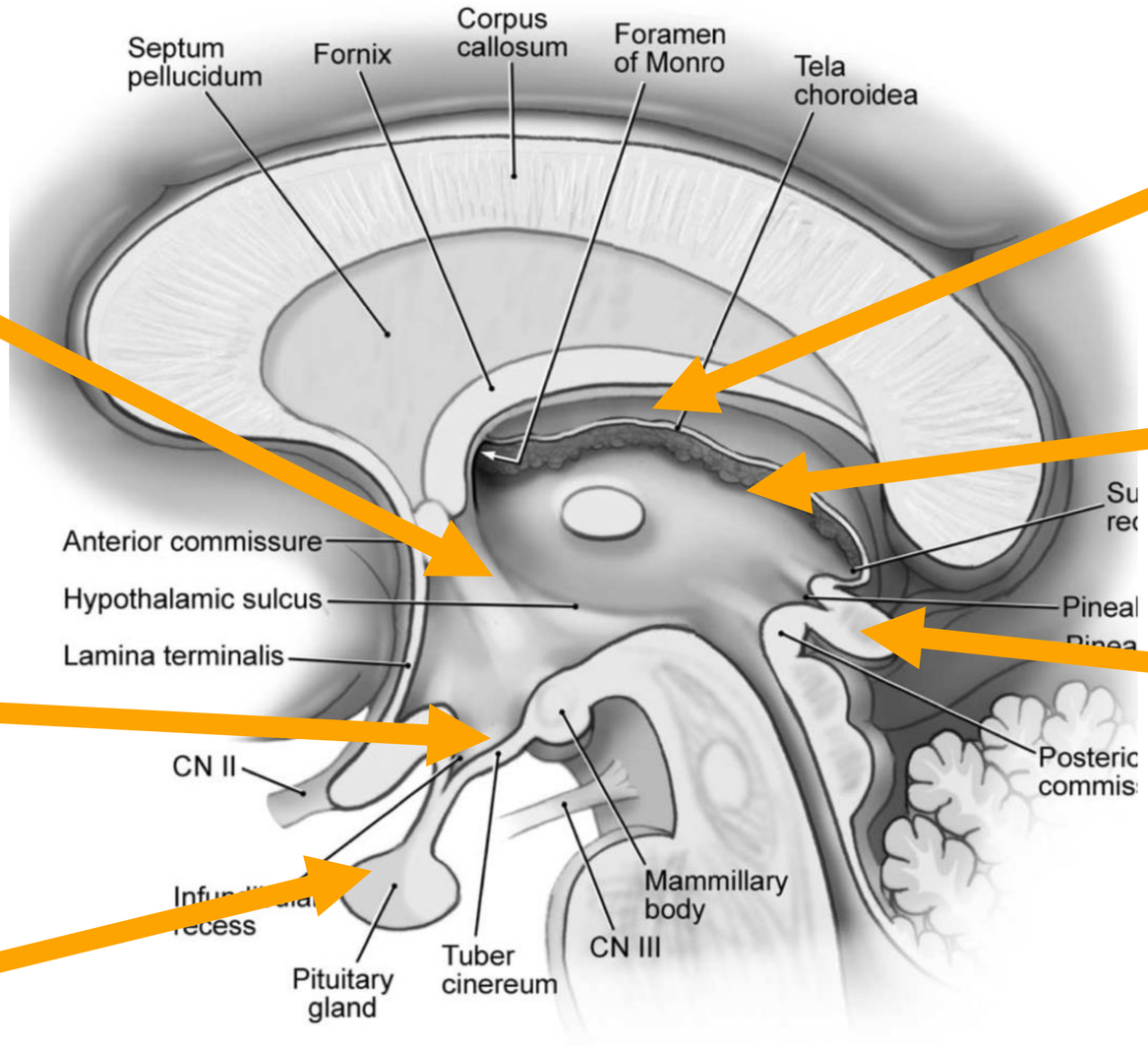
CUARTO VENTRÍCULO

TERCER VENTRÍCULO

GLIOMAS

CRANEOFARINGIOMA

ADENOMAS HIPOFISIRARIOS



QUISTE COLOIDE

MALFORMACIONES

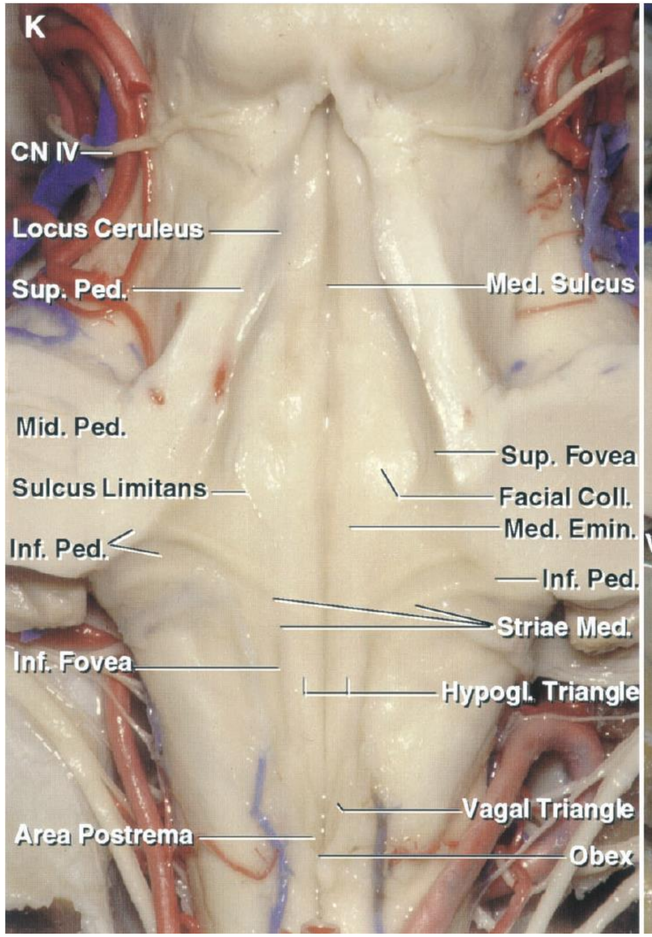
TUMORES DE LA REGIÓN PINEAL

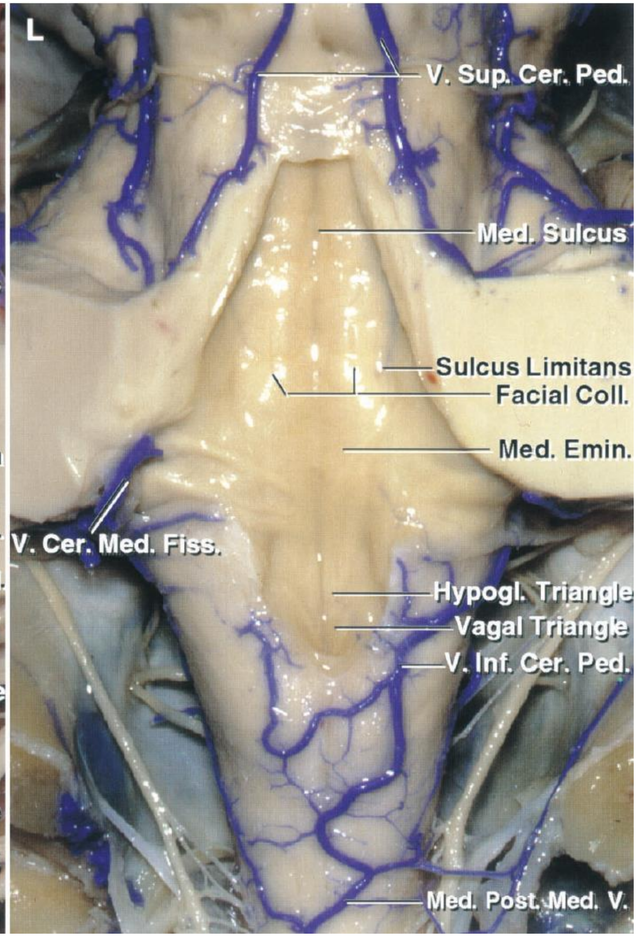
CUARTO VENTRÍCULO

EPENDIMOMAS

ASTROCITOMA PILOCITICO

MEDULOBLASTOMA





CAVERNOMA EXOFITICO

GLIOMAS

HEMANGIOBALSTOMA

QUISTE EPIDERMOIDE

QUISTE CISTICERCO

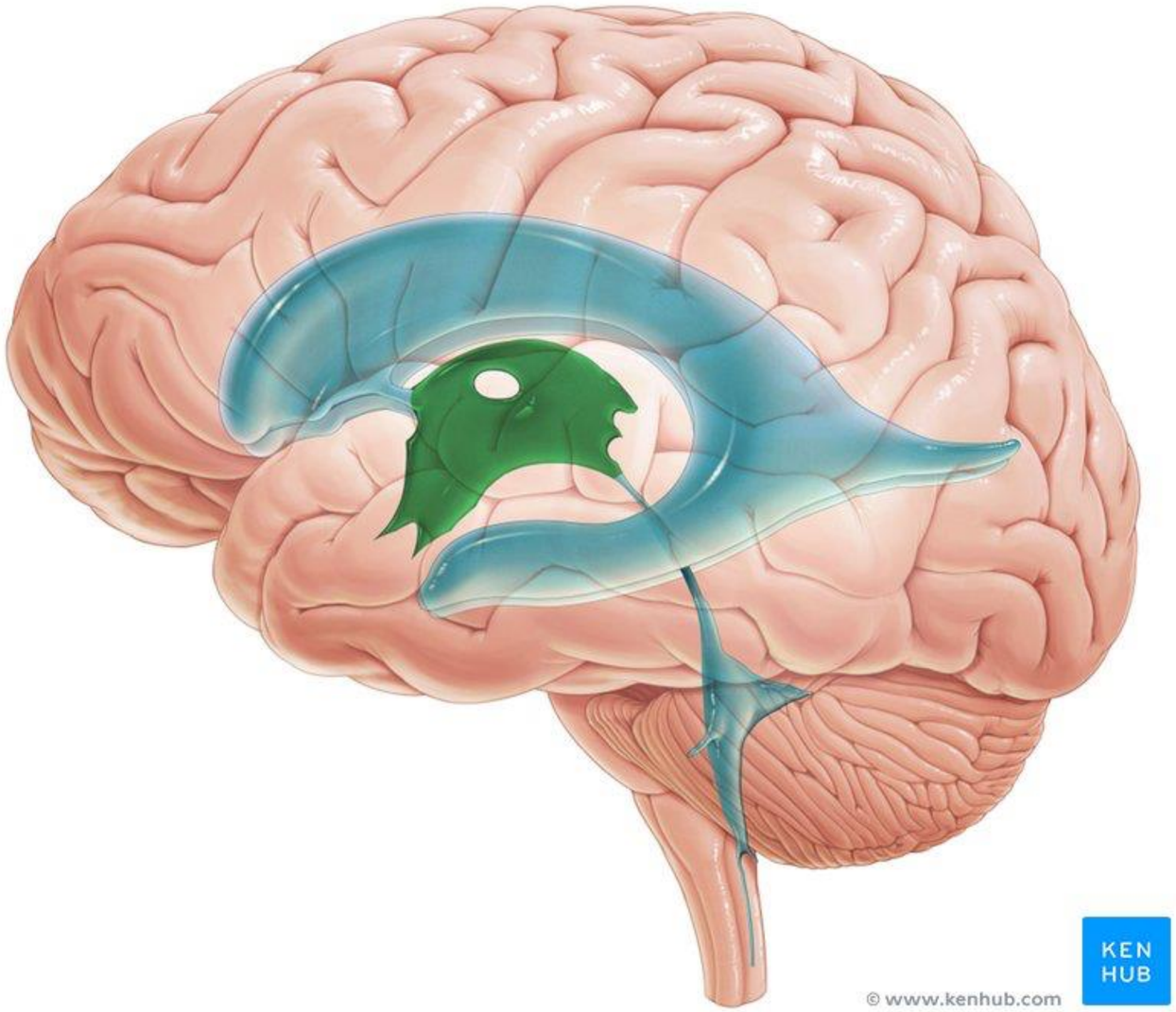
VENTRÍCULOS LATERALES

EPENDIMOMAS
1.6% (T-ST)ADULTO

SUBEPENDIMOMAS
0.4%(T)—40%VL

NEUROCITOMA CENTRAL
0.1-0.4% (T)
80% I.V
50-60% CUERPO. V

PAPILOMA PLEXO COROIDEOS
50% VL



METÁSTASIS
6% TODAS

GLIOMAS BAJO GRADO

2.2 %

GLIOMAS DE ALTO GRADO

MALFORMACIONES ARTERIOVENOSAS
1-3.5%

MENINGIOMA
1-5%

CARACTERÍSTICAS PROPIAS IMAGENOLÓGICAS DE CADA TIPO DE LESIÓN

Neoplasm	CT Characteristics			MR Imaging Characteristics†			Comment
	Density	Calcified	Enhancement	T_1 intensity	T_2 intensity	Enhancement	
CPP	iso–hyper (3/4)	25%	+++	hypo	iso–hyper	+	trigone in children; all ventricles dilated; may be locally invasive
CPC	iso	25%	+++	hypo	iso–hyper	+	trigone in children; craniospinal dissemination
astrocytoma (low-grade)	iso	15–20%	+	hypo	hyper	+	pilocytic: cystic, mural nodule may enhance intensely
SGCA	mixed (iso–hypo)	common	+++	hypo–iso	iso–hyper	++	tuberous sclerosis; arise in region of FOM
ependymoma	iso	(50%)	++	hypo	hyper	++	supratentorial ependymomas arise in trigone, cystic; local recurrence
meningioma	hyper	(20–25%)	+++	iso	iso	+++	rare in children; cystic; can be multiple; NF-2
PNET	hyper	common	+	hypo	hyper	+ to ++	neonates and infants; highly malignant
central neurocytoma	iso–hyper	yes	++	iso	iso–hyper	+ to ++	immunohistochemistry
germinoma	hyper	uncommon	+++	iso–hyper	iso–hypo	+	CSF & serum tumor markers
teratoma	mixed	yes	−	mixed	mixed	−	heterogeneous & variable imaging characteristics
craniopharyngioma	hyper	yes (90% rim calcified)	+++	hypo	hyper	+++	cystic: adamantinomatous; children > adults; solid: papillary; adults > children
colloid cyst	iso (1/3) hyper (2/3)	no	rim	hyper	hypo	rim	mixed MR signal based on cyst content

6

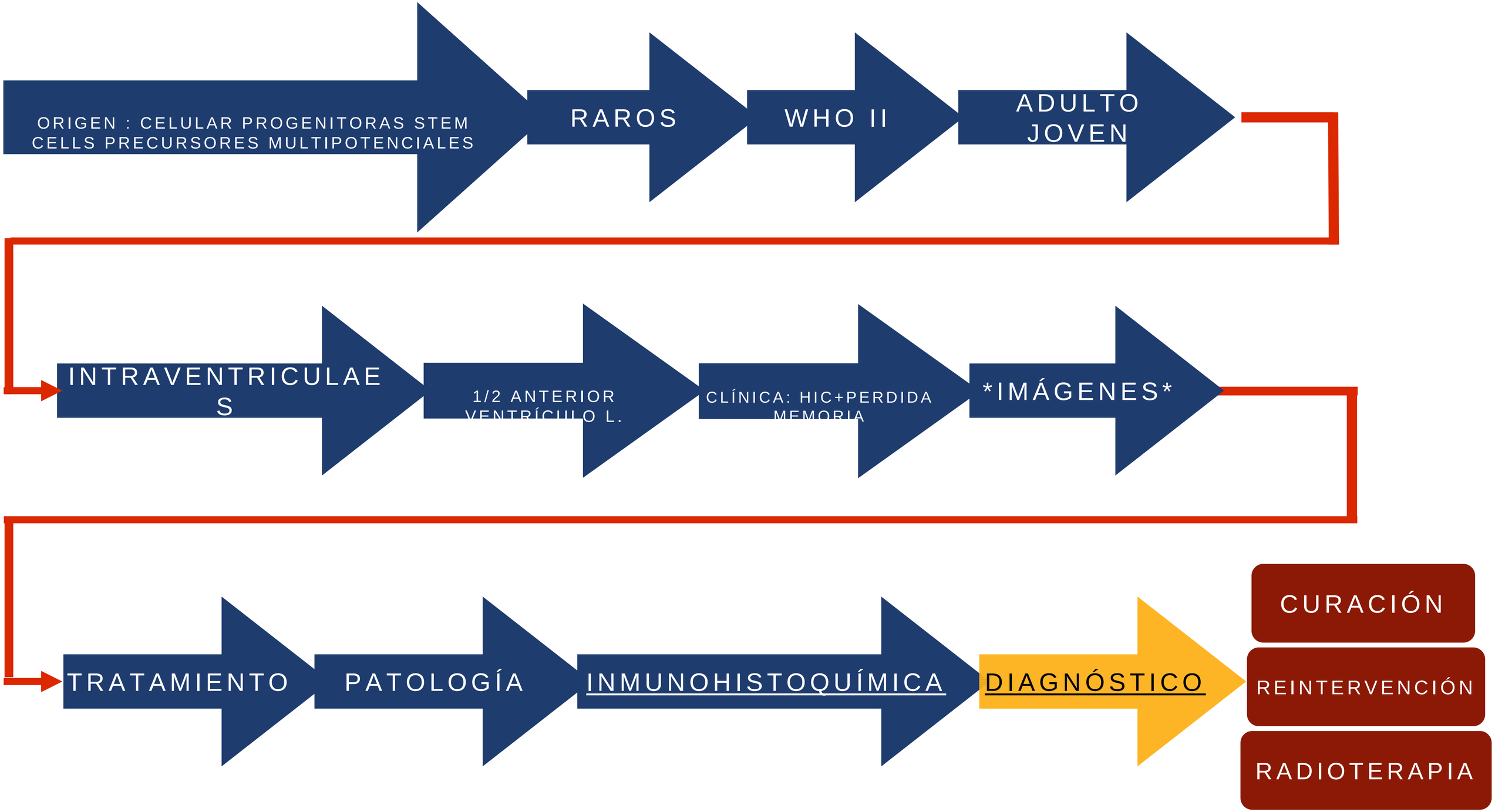
TRATAMIENTO ESPECIFICO

- CIRUGÍA
  - DVA-DVP-TVE
    - COMPLETA
    - PARCIAL
    - BIOPSIA
  - RESECCIÓN
  - CLIPAJE
  - ENDOVASCULAR
- RADIOTERAPIA
  - CONVENCIONAL
  - RADIOCIRUGÍA ESTEREOTAXICA
- QUIMIOTERAPIA
  - SISTÉMICA
  - INTRAQUÍSTICA
  - INTRATECAL
- ANTIBIÓTICO
  - SISTÉMICO
  - INTRATECAL

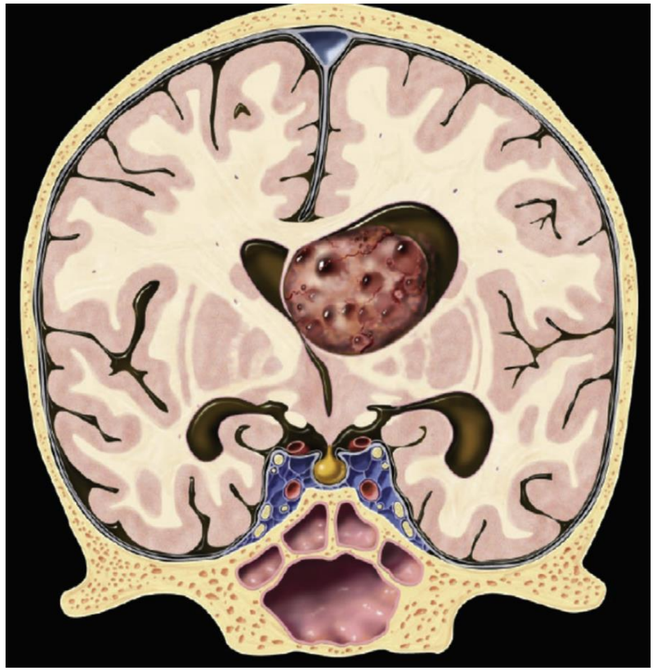
RESOLUCIÓN DE CASO CLÍNICO

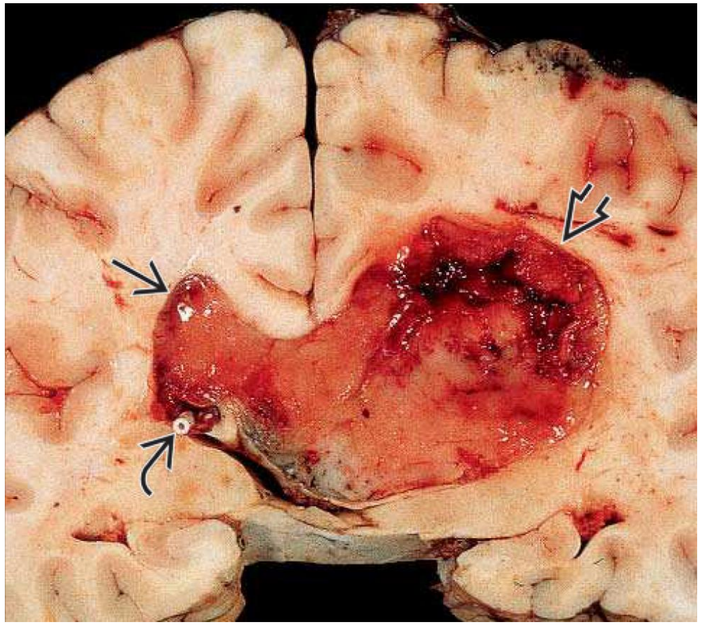
NEUROCITOMA CENTRAL

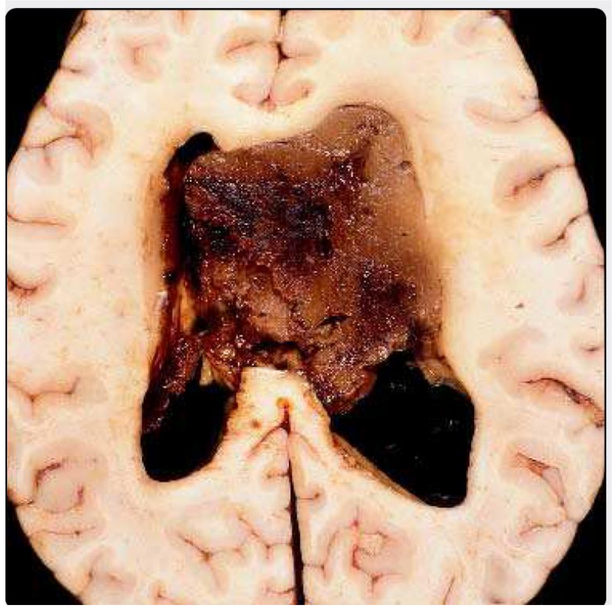
Tumor neuroepitelial bien diferenciado con elementos neurociticos maduros


ORIGEN : CELULAR PROGENITORAS STEM CELLS PRECURSORES MULTIPOTENCIALES
RAROS
WHO II
ADULTO JOVEN
INTRAVENTRICULAES
1/2 ANTERIOR VENTRÍCULO L.
CLÍNICA: HIC+PERDIDA MEMORIA
IMÁGENES
TRATAMIENTO
PATOLOGÍA
INMUNOHISTOQUÍMICA
DIAGNÓSTICO
CURACIÓN
REINTERVENCIÓN
RADIOTERAPIA

IMÁGENES



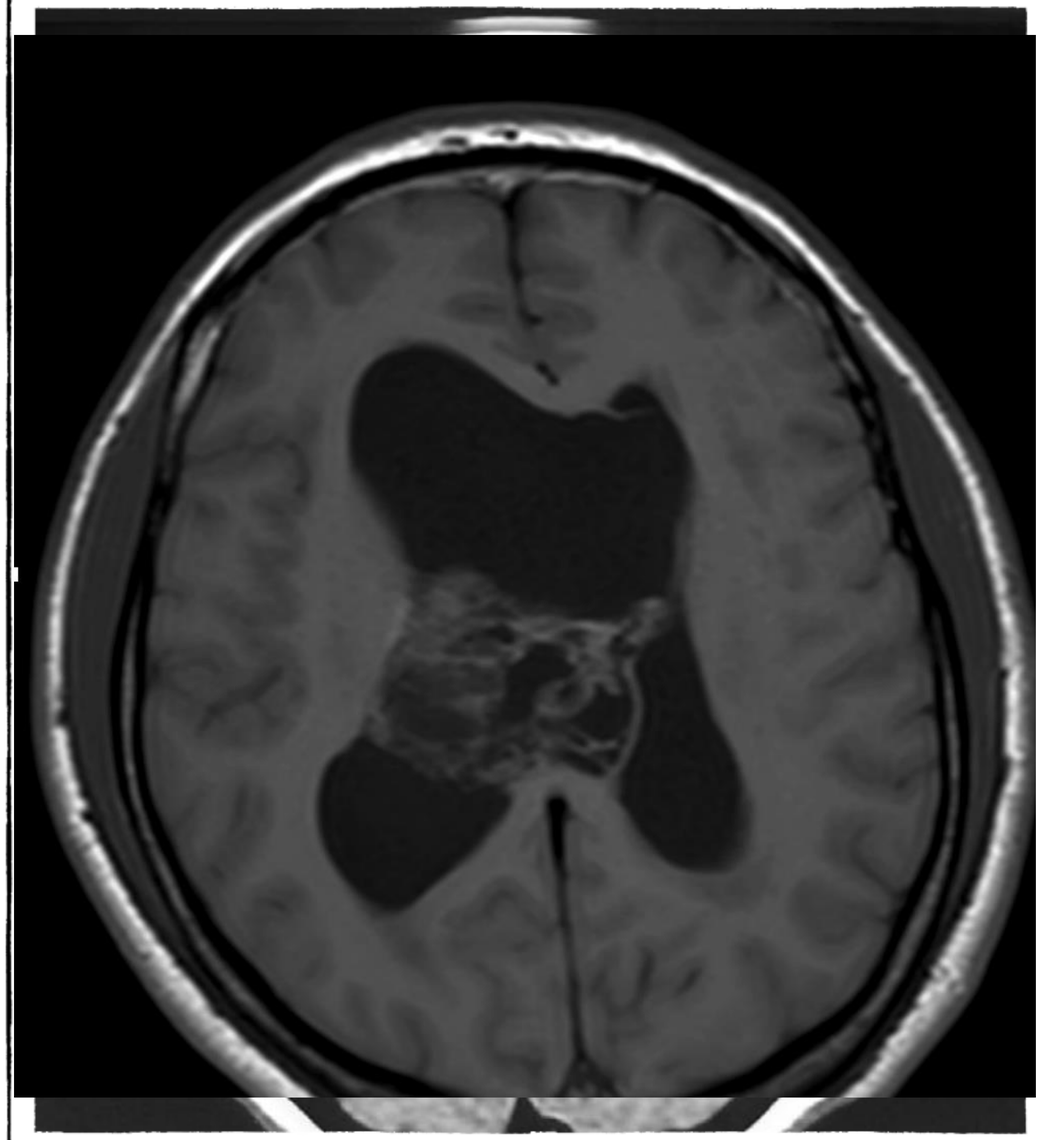




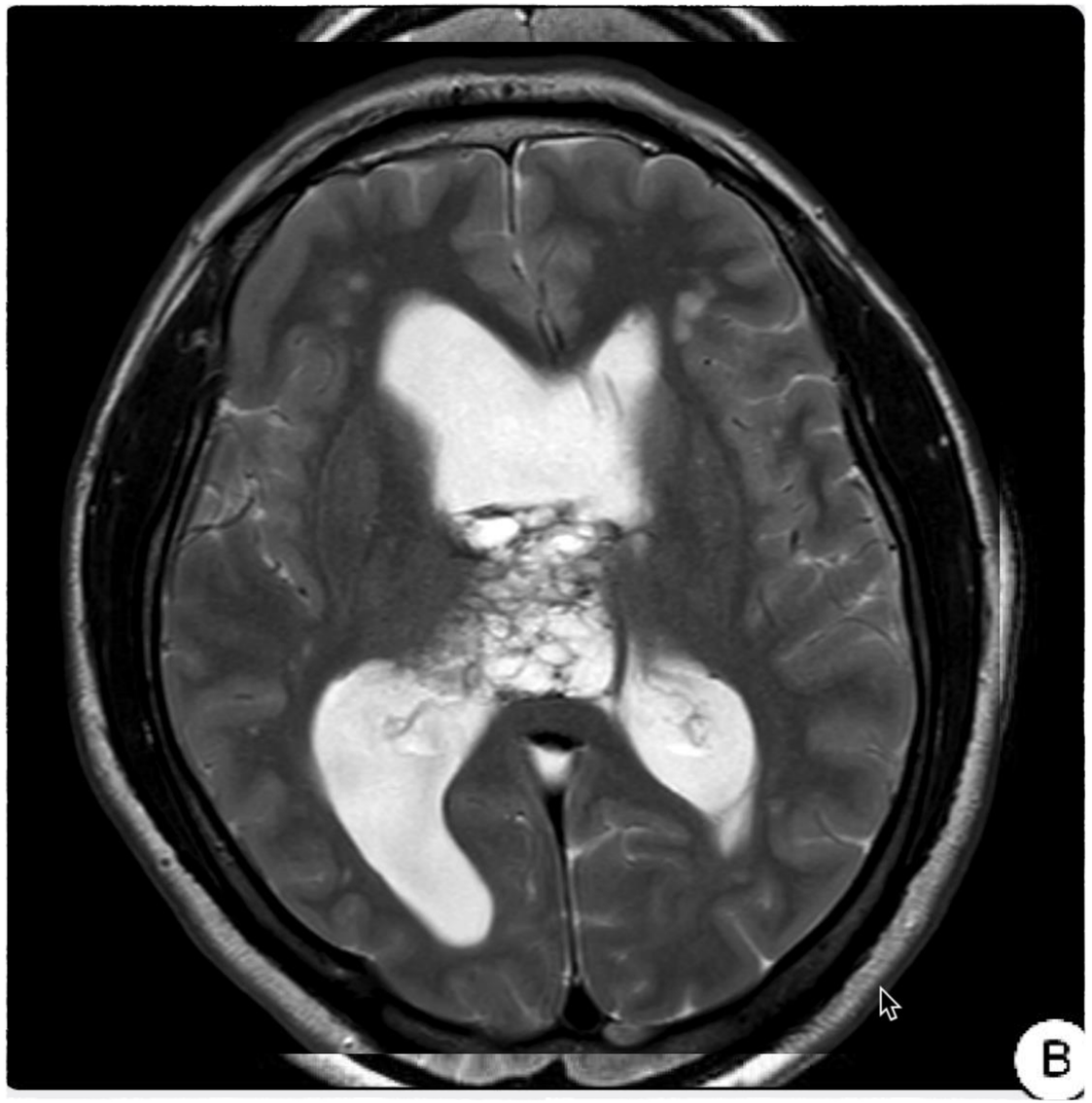
TAC

RESONANCIA MAGNÉTICA CEREBRAL

T1

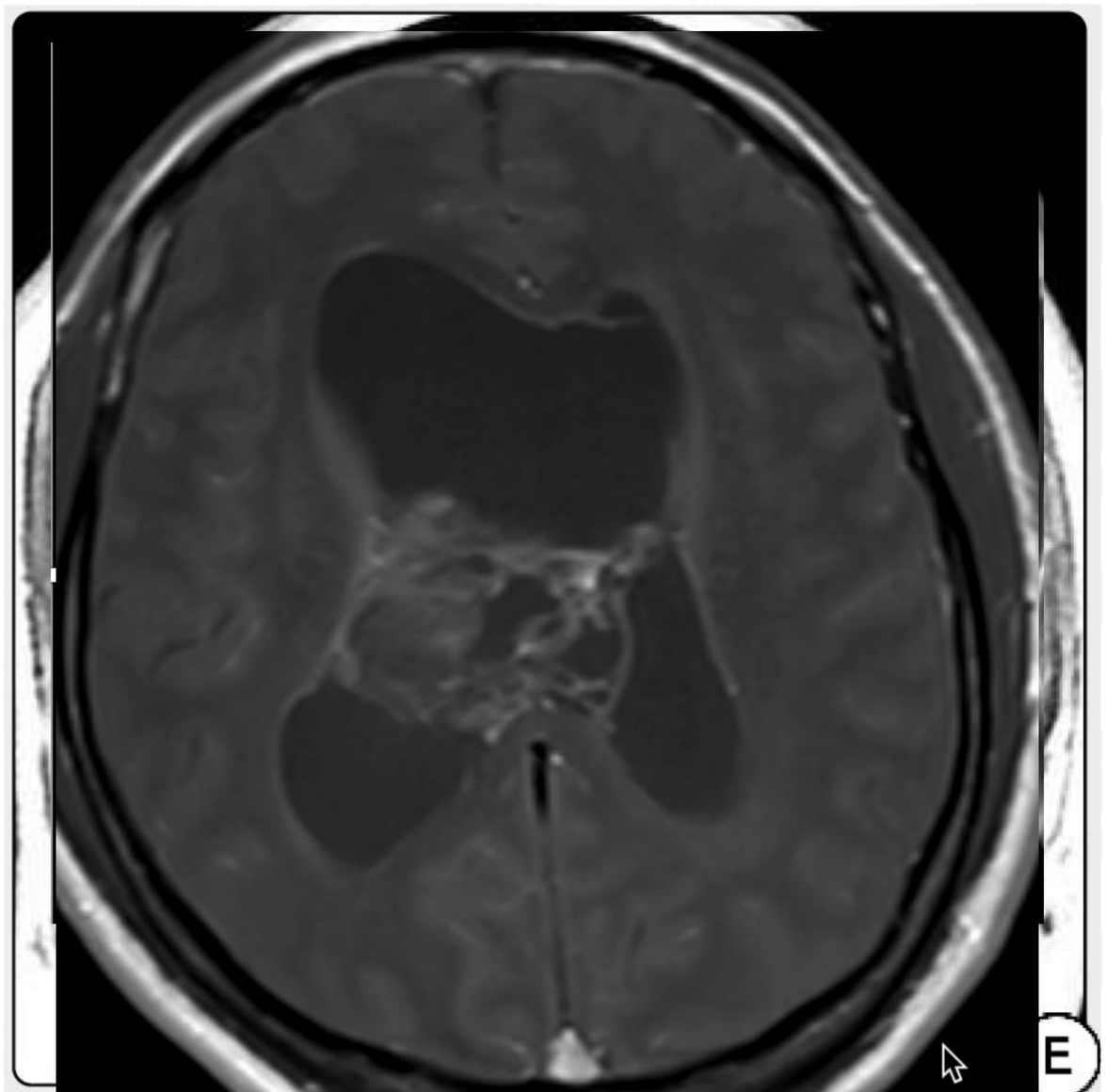


T2



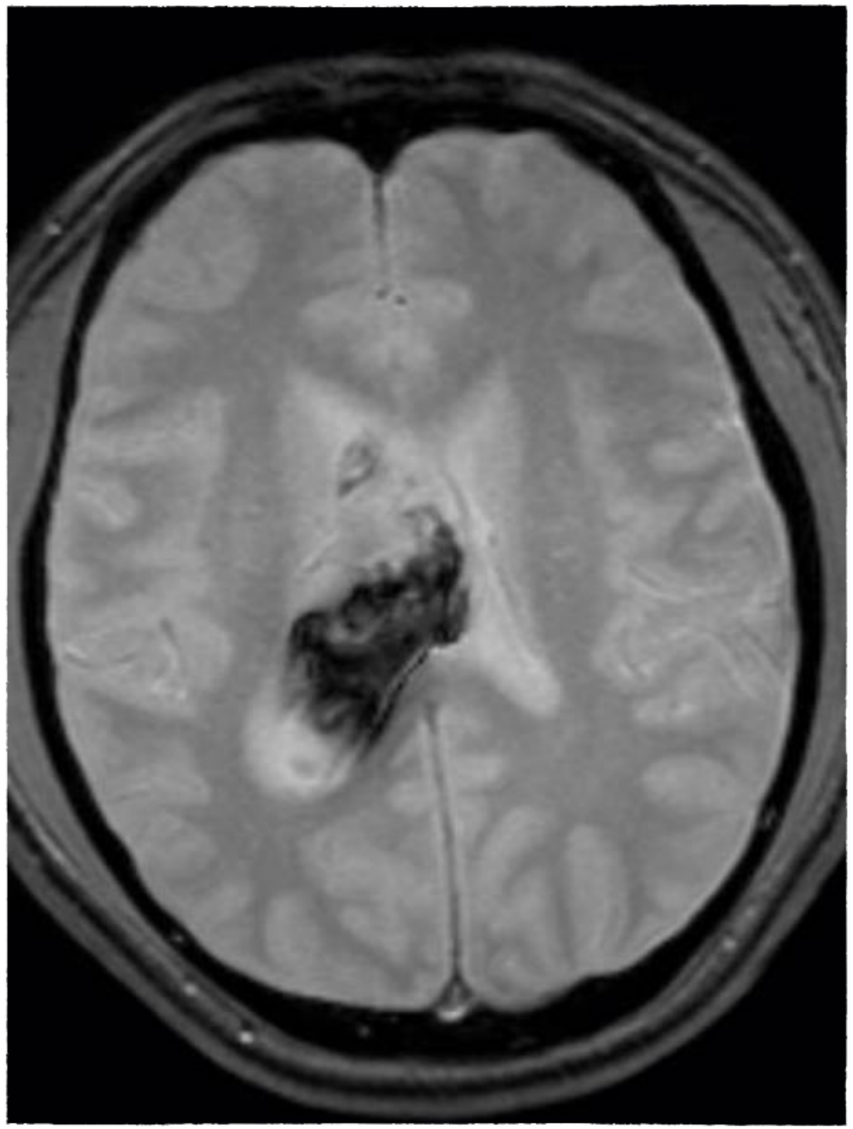
FLAIR

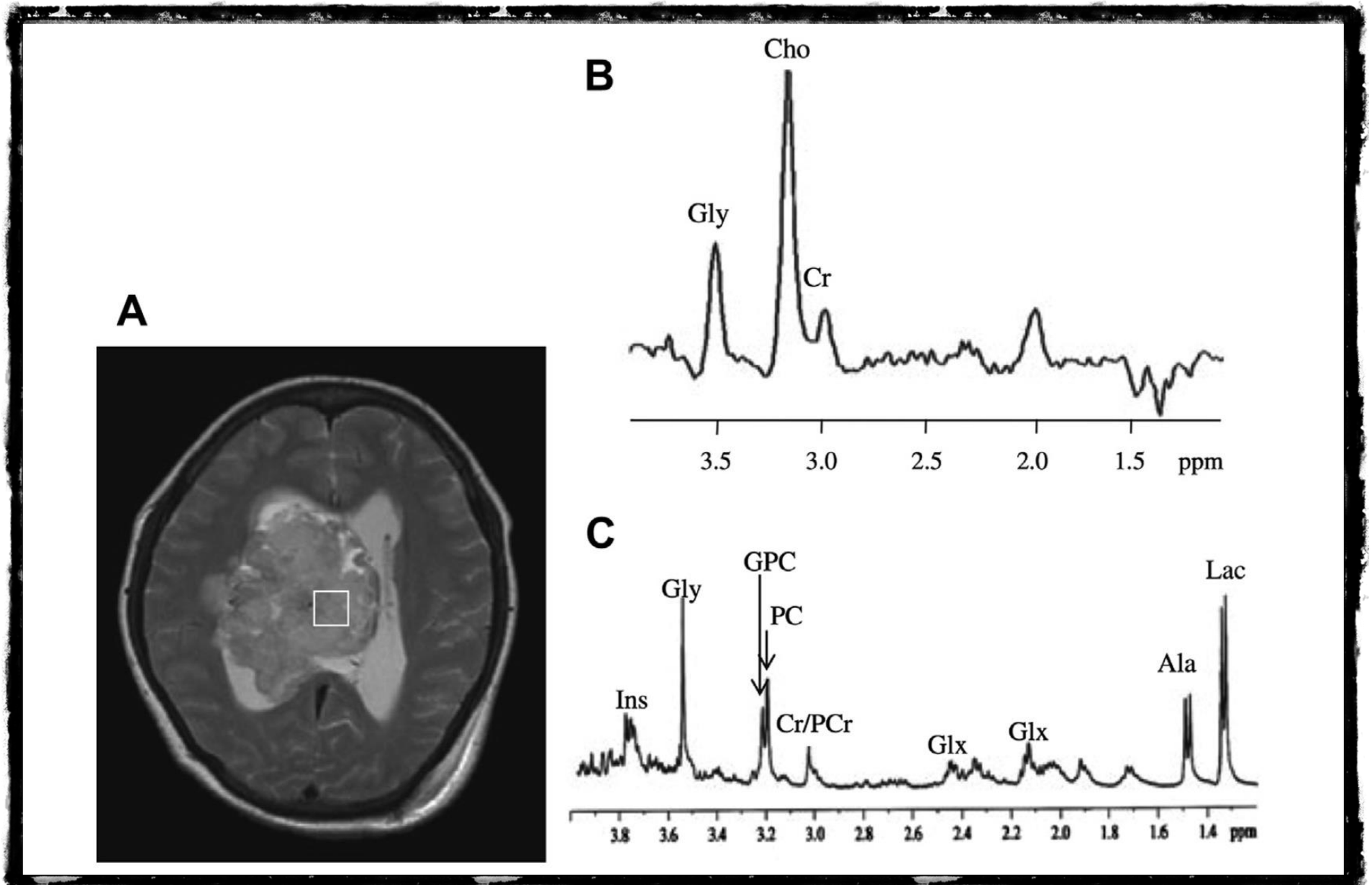
T1+CONTRASTE



DWI

SWI



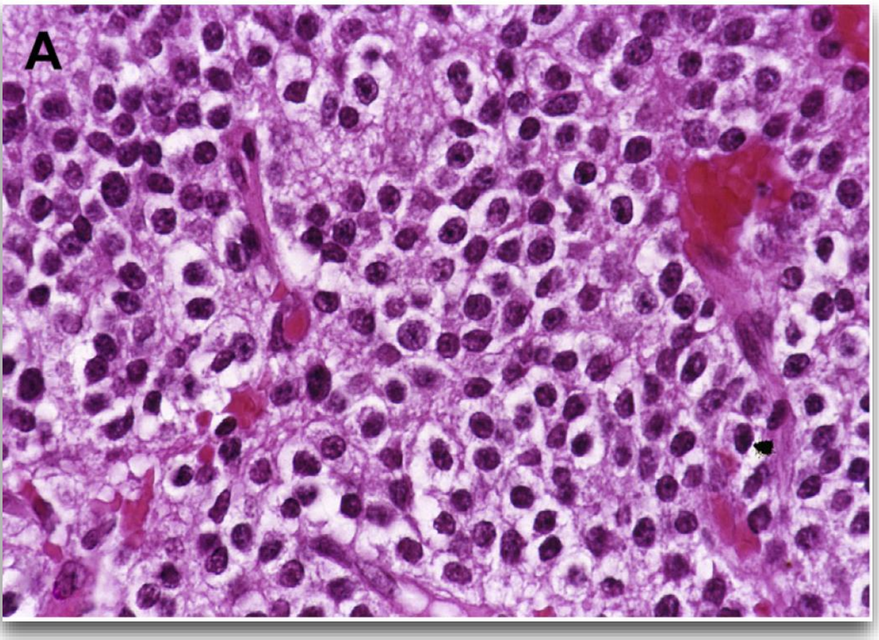

A
B
Cho
Gly
Cr
3.5
3.0
2.5
2.0
1.5
ppm
C
GPC
Gly
PC
Lac
Ala
Ins
Cr/PCr
Glx
Glx
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
ppm

DIAGNÓSTICO DIFERENCIAL IMAGENOLÓGICO

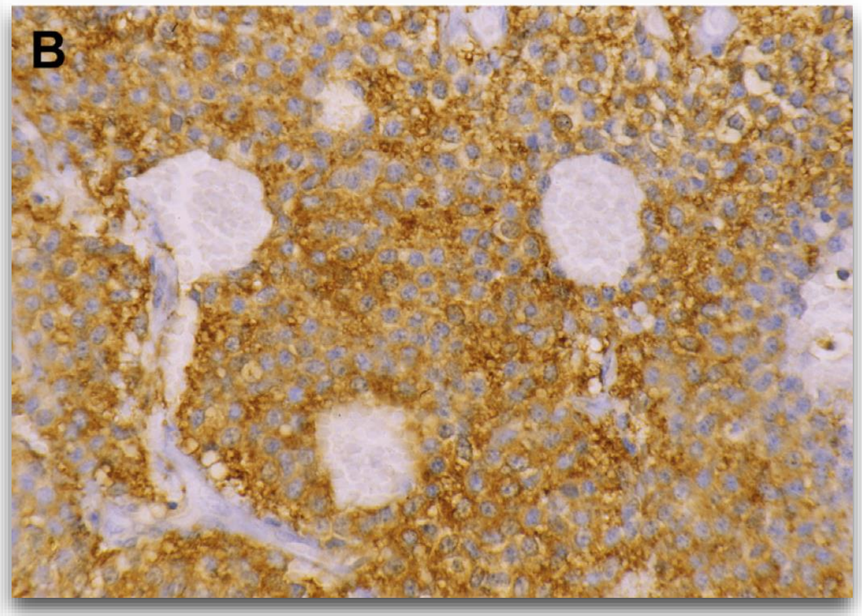
Table 1
Differential diagnosis of similar intraventricular lesions

Disease Entity	Radiologic Differentiation from CN
Subependymal giant cell tumor	Almost exclusively associated with cortical tubers, avidly enhances compared with CN
Subependymoma	Typically nonenhancing and hypovascular compared with hypervascular, intermediately enhancing CN. More common in fourth ventricle, older age preference
Ependymoma	Uncommon in lateral ventricles. May also extend into periventricular white matter
Choroid plexus papilloma (CPP)	Typically in children less than 5; when presenting in an adult CPP is more common in the fourth ventricle. Typically in trigone. "Frondlike" or "cauliflower" appearance of CPP compared with "soap bubble" of CN
Metastatic disease	Appearance varies depending on primary; lung can appear quite similar to CN. Consider in patients with known primary. Larger lesions may invade parenchyma or have associated edema, unlike CN
Meningioma	More common in trigone than frontal horn or body; more common in elderly. Often calcified, but not cystic. Increased homogenous enhancement compared with moderate heterogeneous enhancement of CN
Oligodendroglioma	Challenging to differentiate radiographically, may have edema (edema absent in CN), advanced MRS techniques being developed may be helpful

PATOLOGÍA/INMUNOHISTOQUÍMICA



ISLAS NEUROPILAS



SINAPTOFISINA +

AG.NUCL.NEU +

Syn
3 + D
3 + D
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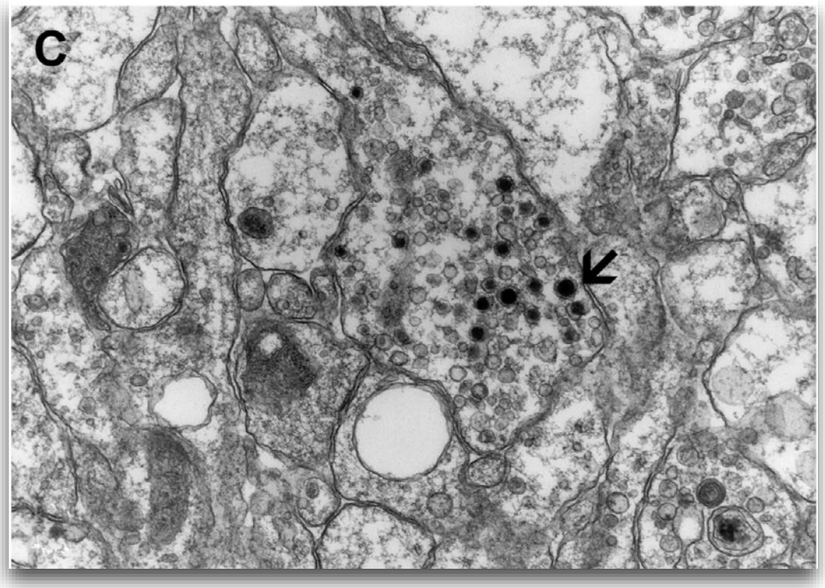


SINAPSIS DENSA

NEUROSECRECIÓN

KI-67%
<1
N/A
–
<1
2–4
1–2
–
1
1–2
<1
2
10

KI67

>2%

MAS RECURRENCIAS

MENOR SOBREVIDA

MENOR RESPUESTA A RADIOTERAPIA CONVENCIONAL

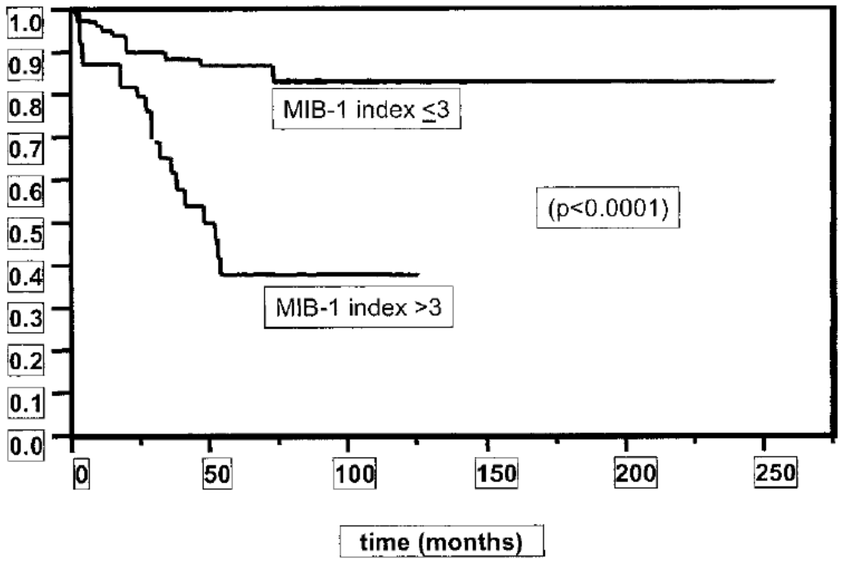


Figure 1. Comparison of MIB-1 labeling index of ≤3% vs MIB-1 labeling index of >3% for local control (fraction free from recurrence) using the Kaplan–Meier analysis[4] (local control rate/time in months). Five-year local control rates: MIB-1 index of >3 (38%) vs MIB-1 index of ≤3 (87%), p < 0.0001.

Prognostic value of the MIB-1 labeling index for central neurocytomas

Dirk Rades, MD; Steven E. Schild, MD; and Fabian Fehlauer, MD

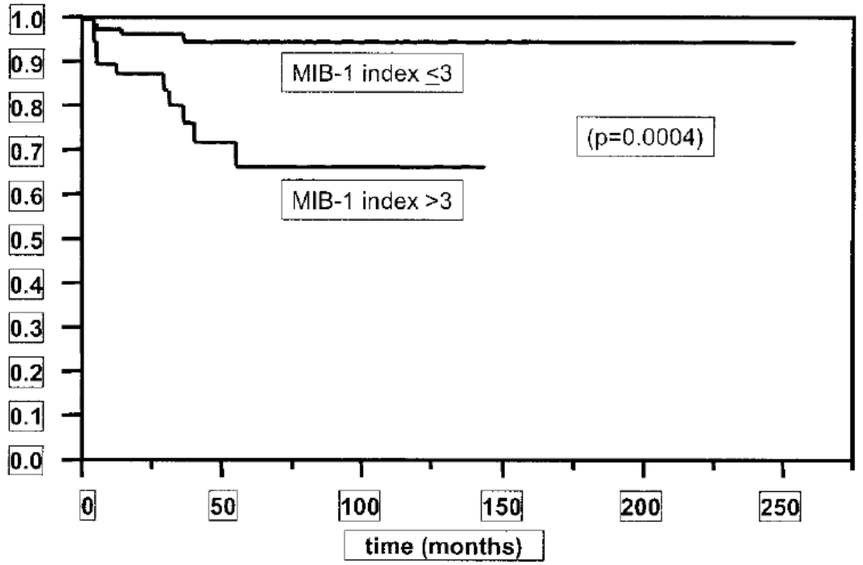


Figure 2. Comparison of MIB-1 labeling index of ≤3% vs MIB-1 labeling index of >3% for overall survival using the Kaplan–Meier analysis[4] (survival rate/time in months). Five-year survival rates: MIB-1 index of >3 (66%) vs MIB-1 index of ≤3 (95%), p = 0.0004.

RADIOTERAPIA

Table 2
Conventional radiation treatment includes studies summary

Study Authors, Year (PMID)	No. Tumors/ Subjects	cRT Protocol Description (Detail Reported in Study)	Median Dose, Gy (Range)	Tumor Change Last Follow-up	Median Follow-up Time, mo (Range)	All-cause Death Fraction	Local Control Fraction
Paek et al, 2008 (18566748)	6/6	Fractionated external beam Co-60 γ-ray 6 MV or 10 MV in 1.5–1.8 fractions, 5 d/wk, margin of 1.5–2.0 cm	54 (50.4–55.8)	4 reduced; 2 disappeared	171 (128–229)	33% (2/6)	100% (6/6)
Chen et al, 2008 (18262625)	5/5	Irradiation therapy as an adjuvant	44.18[a] (20.5–54.0)	NR[b]	29 (15–33)	0% (0/5)	NR[b]
Leenstra et al, 2007 (17187939)	18/18	Localized radiotherapy in 1.8–2.0 Gy fractions	54.5 (48.6–61.2)[c]	NR[b]	19 (19–281)	78% (14/18)	78% (14/18)
Lenzi et al, 2006 (16604374)	5/5	Conformational radiotherapy reaching 2 cm of border preoperative border	45, (NR[b])	3 stable IVNs or complete recovery	84[b] (36–240)	20% (1/5)	40% (2/5)
Ashkan et al, 2000 (10964342)	4/4	Postoperative radiotherapy	55[a], (NR[b])	NR[b]	6 (3–40)	0% (0/4)	100% (4/4)
Sharma et al, 1999 (10844755)	15/15	Adjuvant radiotherapy over 6 wk	NR[b] (40–60)	NR[b]	36 (6–72)	0% (0/15)	100% (15/15)
Fujimaki et al, 1997 (9120539)	10/10	Whole brain and/or local radiation	55.8[a] (50.0–60.0)	NR[b]	72 (23–160)	0% (0/10)	90% (9/10)
Louis et al, 1990 (2086738)	4/4	Irradiation therapy to tumor or to axis	54 to tumor; 30 to axis (n/a)	All IVNs stable size	40 (11–78)	0% (0/4)	100%

Igor J. Barani, MD*, David R. Raleigh, MD, PhD, David Larson, MD, PhD

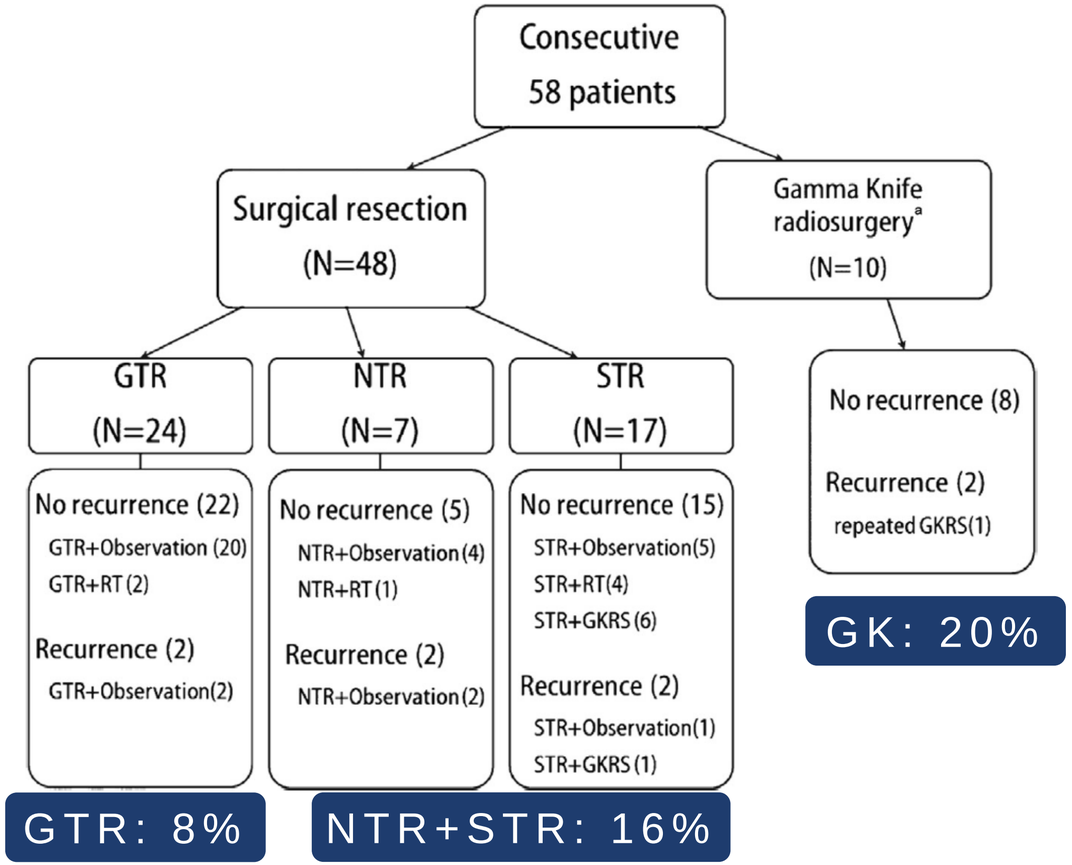
RADIOTERAPIA

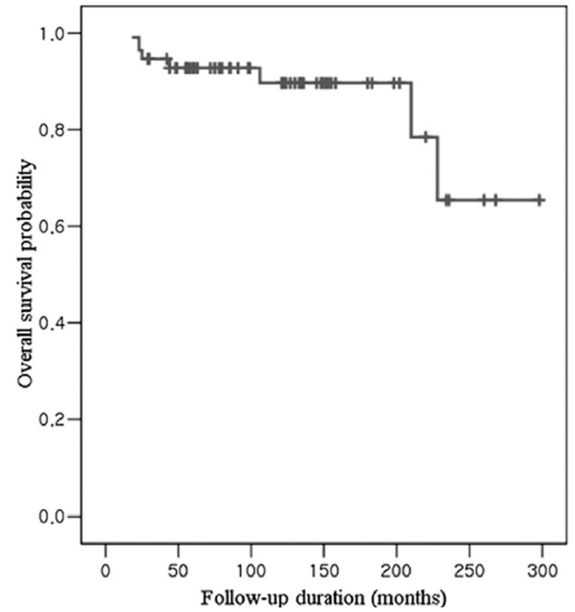
Table 1
Stereotactic radiosurgery group includes studies summary

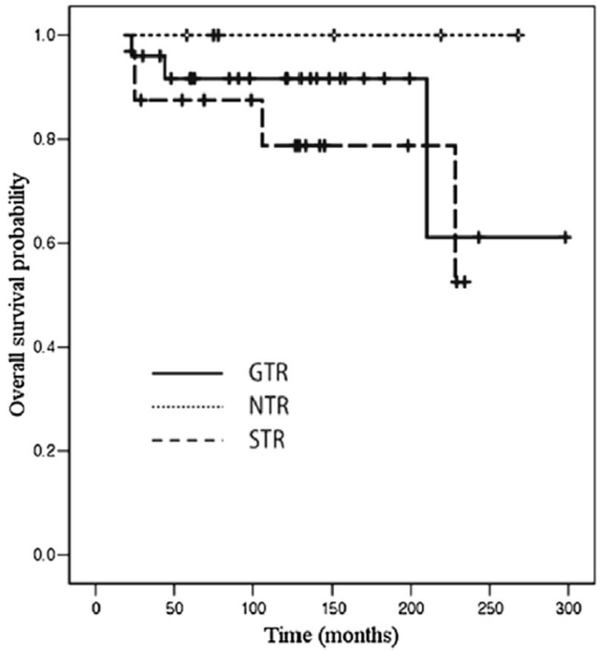
Study Authors, Year (PMID)	No. Tumors/ Subjects	SRS Type	Mean Marginal Dose, Gy (Range)	Isodose Line, % (Mean)	Pre- Mean Tumor Vol, cm^3 (Range)	Post- Mean Tumor Vol, cm^3 (Range)	Median Follow-Up Time, mo (Range)	All-cause Death Fraction	Local Control Fraction
Karlsson et al, 2012 (23205795)	35/35	GKS	14 (11–25)	NR[a]	12.0 (1–49)	NR[a]	30 (1.4–14.1)	0%[b]	83% (4 cases)
Genc et al, 2011 (21732073)	18/18	GKS	16.7 (9–20)	50 (50)	12.18 (0.7–68.9)	10.19 (0.01–68.9)	31 (6–110)	0%	93% (13/14)
Matsunaga et al, 2010 (20185873)	8/7	GKS	13.9 (12–18)	50–75 (55.6)	3.86 (0.3–6.1)	NR[a]	63.6[c] (15–136)	14% (1/7)	88% (7/8)
Kim et al, 2007 (17926332)	7/7	GKS	15.7 (15–18)	50 (50)	9.97 (5.3–16.3)	4.36 (1.1–11.3)	61 (26–77)	0%	29% (2/7)
Yen et al, 2007 (17639866)	8/6	GKS	15.1 (9–20)	30–60 (32.5[d])	6.05 (1.4–19.8)	NR[a]	72 (6–123)	17% (1/6)	100%
Martin et al, 2003 (14505100)	4/4	GKS	16.5 (16–18)	89–110 (94.8)	9.00 (4.0–23.0)	3.22 (1–8.09)	33 (3–54)	0%	100%
Anderson et al, 2001 (11383724)	4/4	GKS	17.0 (16–20)	NR[a]	7.02 (1.73–12.3)	NR[a]	13 (12–28)	0%	100%
Cobery et al, 2001 (11213974)	4/4	LINAC	10.5 (9–13)	30–50 (42.5)	14.75 (6.5–10.5)	3.75 (2.5–5.4)	32.5 (12–99)	0%	100%

Igor J. Barani, MD*, David R. Raleigh, MD, PhD, David Larson, MD, PhD

COMO LES VA



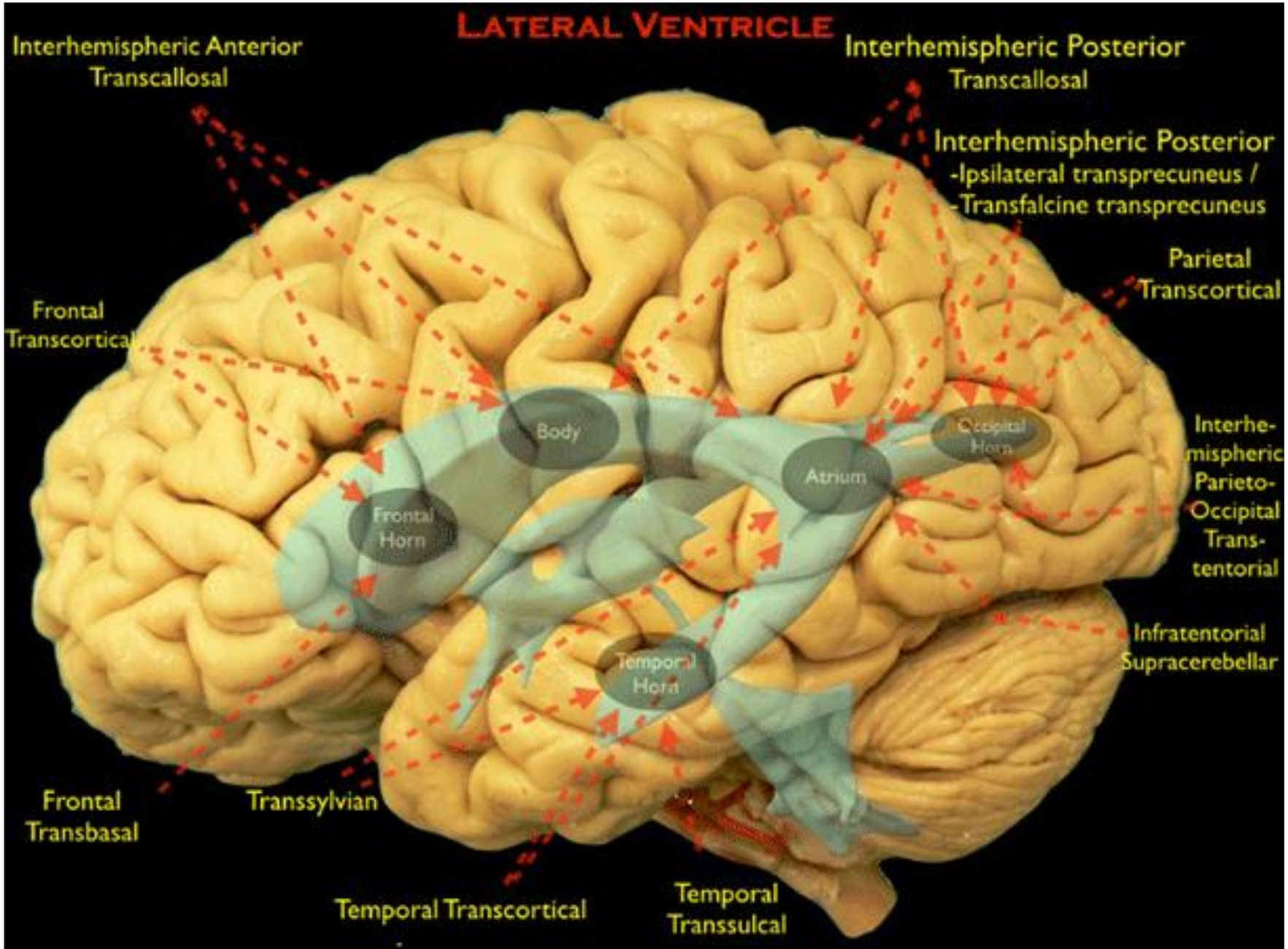




RESEARCH—HUMAN—CLINICAL STUDIES

Central Neurocytoma: Long-term Outcomes of Multimodal Treatments and Management Strategies Based on 30 Years' Experience in a Single Institute

ABORDAJES QUIRÚRGICOS A LOS VENTRÍCULOS LATERALES




THANK
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YAQHANYELAY
TASHAKKUR ATU
SUKSAMA
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JUSPAXAR
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SNACHALHUYA
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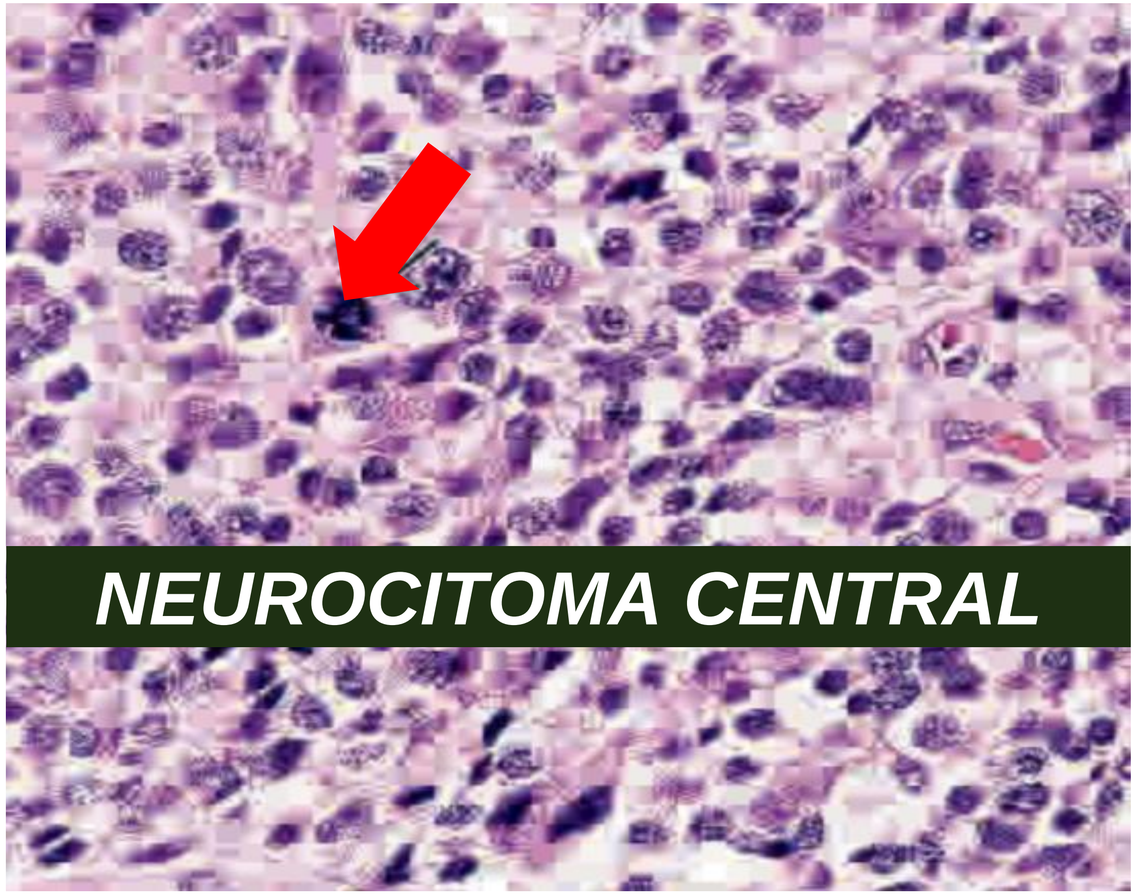
HUI
GUI
HÄTÄR
SPASIBO
DENKAUJA
HENACHALHIYA
UNALCHÉESH
EKOJU
SIKOMO
MERSI
ATTO
AHHA
DHANYABAAD
SAINÇO
LAH
MERASTAWHY
GAEJTHO
TAVTAPUCH
MEDAWAGSE
AGUYJE
FAKAAUE
BAIKA
MAKETAJ

PATOLOGÍA

CASO #1

- Sinaptofisina +++
- PGFA +
- Neurofilamentos -
- KI67 5%

ATÍPICO



CASO #2

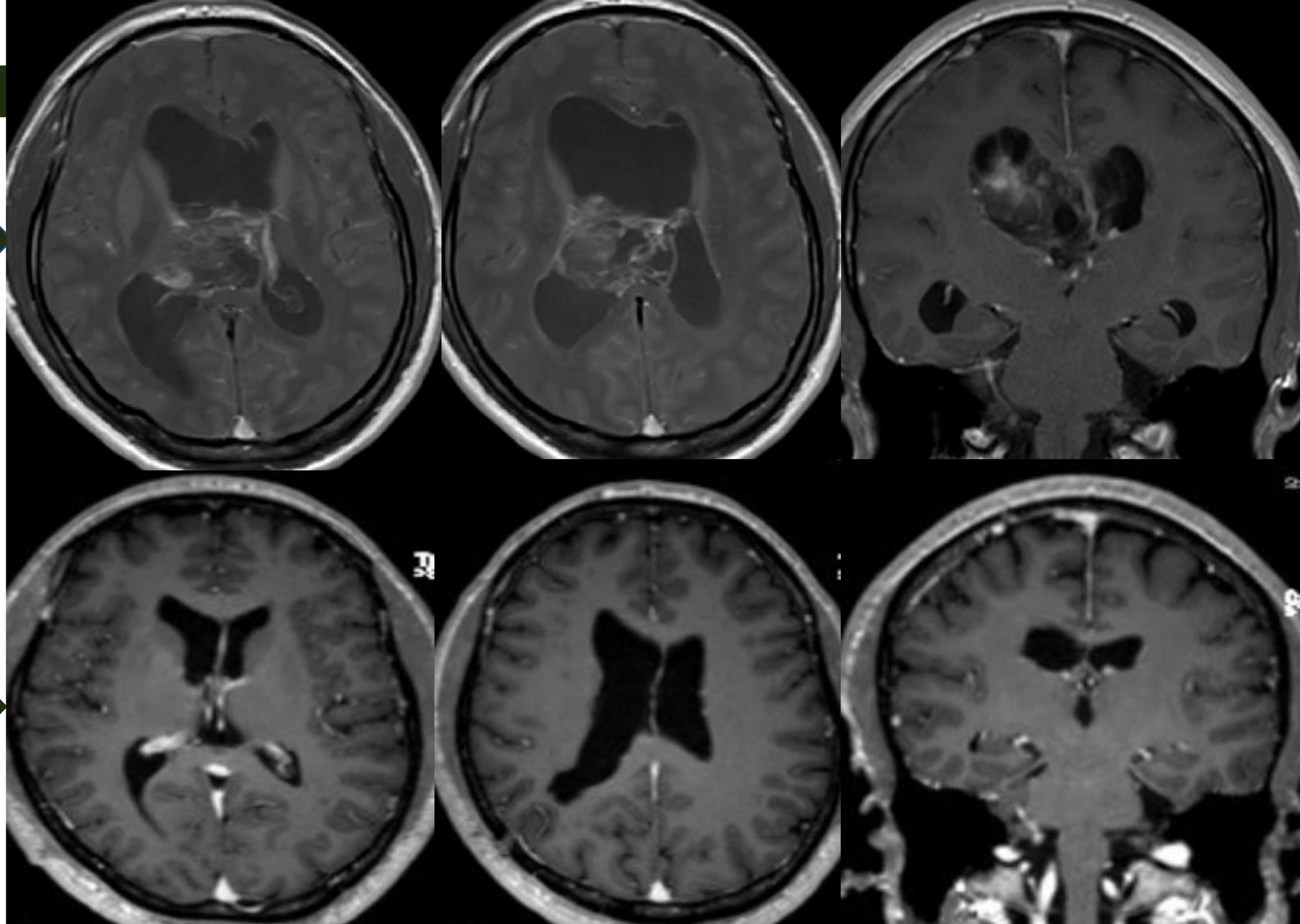
- Sinaptofisina +++
- PGFA +
- Neurofilamentos +
- KI67 2%

CASO #1

PRE-OP

VS

POP
2 años

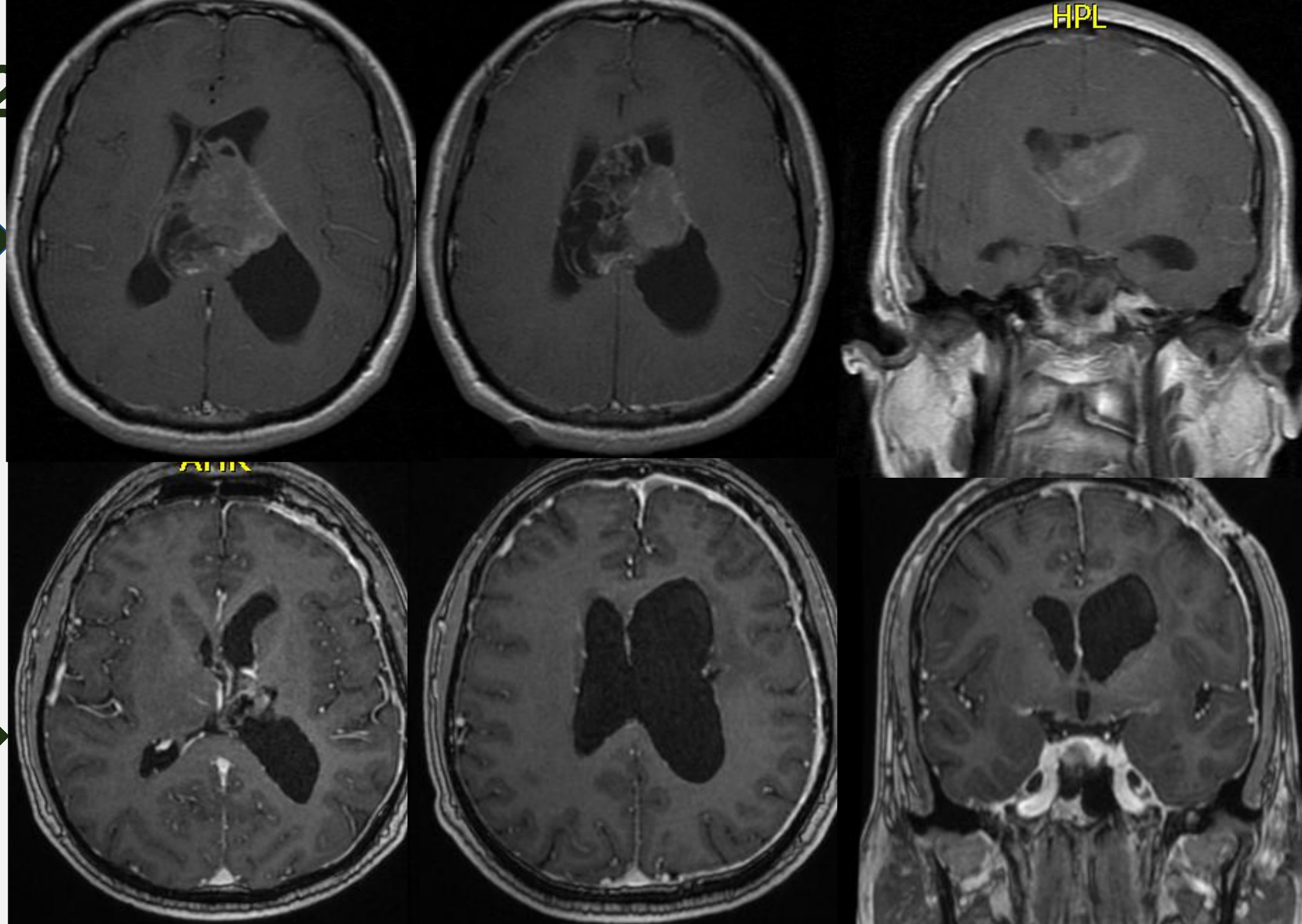


CASO #2

PRE-OP

VS

POP
1 año



Pediatric supratentorial intraventricular tumors

DANIEL Y. SUH, M.D., PH.D., AND TIMOTHY MAPSTONE, M.D.

Department of Neurosurgery, Emory University School of Medicine, and the Children's Healthcare of Atlanta-Egleston, Atlanta, Georgia

J Neurosurg 63:185–192, 1985

Arteriovenous malformations of the lateral ventricle

SHIRO WAGA, M.D., D.M.SC., SHINICHI SHIMOSAKA, M.D., AND TADASHI KOJIMA, M.D., D.M.SC.

Department of Neurosurgery, Mie University School of Medicine and Hospital, Tsu, Mie, Japan

Cavernoma intraventricular del foramen de Monro: particularidades derivadas de su localización atípica

A. Meilán Martínez[a,*], P. Vega Valdés[a], E. Santamarta Liébana[a] y J.C. Rial Basalo[b]

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[b]*Servicio de Neurocirugía, Hospital Universitario Central de Asturias, Oviedo, España*

Iconographic Essay

Intraventricular mass lesions at magnetic resonance imag iconographic essay – part 1*

Lesões expansivas intraventriculares à ressonância magnética: ensaio iconográfico – part

Felipe Damásio de Castro[1], Fabiano Reis[2], José Guilherme Giocondo Guerra[3]

REVIEW ARTICLE Brain Tumor Res Treat 2016;4(2):49-57 / pISSN 2288-2405 / eISSN 2288-2413
http://dx.doi.org/10.14791/btrt.2016.4.2.49

Central Neurocytoma: A Review of Clinical Management and Histopathologic Features

Seung J. Lee[1], Timothy T. Bui[1], Cheng Hao Jacky Chen[1], Carlito Lagman[1], Lawrance K. Chung[1], Sabrin Sidhu[1], David J. Seo[1], William H. Yong[3], Todd L. Siegal[4], Minsu Kim[5], Isaac Yang[1,2]

[1]Department of Neurosurgery, University of California, Los Angeles, Los Angeles, CA, USA

Imaging of Central Neurocytomas

Daniel Donoho, MD*, Gabriel Zada, MD

Neoplasm

INTRAVENTRICULAR MENINGIOMAS: A REVIEW OF 16 CASES WITH REFERENCE TO THE LITERATURE

Makoto Nakamura, M.D.,* Florian Roser, M.D.,* Otto Bundschuh, M.D.,† Peter Vorkapic, M.D., Ph.D.,* and Madjid Samii, M.D., Ph.D.*,†,‡

Report 2013: Tumors of the pineal region

Incidence of pineal tumours. A review of the literature

Incidence des tumeurs pinéales. Revue de la littérature

C. Mottolese*, A. Szathmari, P.-A. Beuriat

Neurological and Neurosurgical Hospital «P. Wertheimer», Pediatric Neurosurgery E, 59, boulevard Pinel, 69677 Bron, France

J Neurooncol (2015) 121:151–157
DOI 10.1007/s11060-014-1616-x

CLINICAL STUDY

Choroid plexus tumor epidemiology and outcomes: implications for surgical and radiotherapeutic management

Donald M. Cannon · Pranshu Mohindra · Vinai Gondi · Tim J. Kruser · Kevin R. Kozak

BJC British Journal of Cancer (2013) 108, 2367–2371 | doi: 10.1038/bjc.2013.221

Keywords: ependymoma; brain tumour; epidemiology; incidence; survival

Descriptive epidemiology of ependymal tumours in the United States

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NEUROSURGERY CLINICS OF NORTH AMERICA

Neurosurg Clin N Am 14 (2003) 593–606

Histology and Molecular Aspects of Central Neurocytoma

Phillip A. Bonney, MD[a], Lillian B. Boettcher, BA[a], Richard S. Krysiak III, BS[a], Kar-Ming Fung, MD, PhD[b], Michael E. Sughrue, MD[a,c,*]

Surgical resection of metastatic intraventricular tumors

Giacomo G. Vecil, MD, Frederick F. Lang, MD*

Department of Neurosurgery, The University of Texas, M.D. Anderson Cancer Center, 1515 Holcombe B Unit 442, Houston, TX 77030-4009, USA

The Management of Residual or Recurrent Central Neurocytoma

Jayesh P. Thawani, MD[a], John Y.K. Lee, MD[b,*]

Contents lists available at ScienceDirect
Journal of Clinical Neuroscience
journal homepage: www.elsevier.com/locate/jocn

Neuropathological Study

Central neurocytoma represents a tumor consisting of diverse neuronal phenotypes

Branavan Manoranjan[a,b,c], John P. Provias[d,*]

ventricular Tumors

HAPTER 138

Ventricular Tumors

Helmut Bertalanffy ■ Niklaus Krayenbühl ■ Christian Wess ■ Oliver Bozinov

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POLISH JOURNAL of RADIOLOGY
http://www.polradiol.com

Review paper

Ruptured intracranial dermoid cysts: a pictorial review

ELSEVIER
Journal of the Neurological Sciences 266 (2008) 63–69
Neurological Sciences
www.elsevier.com/locate/j

Intraventricular vascular malformations mimicking tumors: Case reports and review of the literature

Wei-Zheng Song[a], Bo-Yong Mao[a], Bi-Fu Hu[b], Yan-Hui Liu[a], Hong Sun[a], Qing Mao[a,*]

Prognostic value of the MIB-1 labeli index for central neurocytomas

Dirk Rades, MD; Steven E. Schild, MD; and Fabian Fehlauer, MD

The Management of Central Neurocytoma Radiotherapy

Igor J. Barani, MD*, David R. Raleigh, MD, PhD, David Larson, MD, PhD

Clinical Outcome and Quality of Life After Treatment of Patients with Central Neurocytoma

Chae-Yong Kim, MD, PhD[a], Dong Gyu Kim, MD, Jin Deok Joo, MD[a], Yong Hwy Kim, MD[a]

Patterns of Hydrocephalus Caused by Congenital *Toxoplasma gondii* Infection Associate With Parasite Genetics

RESEARCH—HUMAN—CLINICAL STUDIES

Lateral Ventricular Neoplasms of the Brain: Differential Diagnosis Based on Clinical, CT, and MR Findings

Operative techniques for tumors in the thi ventricle

Shizuo Oi MD [a], Amir Samii MD [b], Madjid Samii MD [b]

Central Neurocytoma: Long-term Outcomes of Multimodal Treatments and Management Strategies Based on 30 Years' Experience in a Single Institute

J Neurosurg 125:1420–1430, 2016

Intraventricular aneurysms: Case reports and review of the literature

Zhu Yuan[a,*], Zhao Woha[b,1], Xu Weiming[b,2]

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[b] *Department of Neurosurgery, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430022, China*

Natural history of colloid cysts of the third ventricle

Thomas L. Beaumont, MD, PhD,[1] David D. Limbrick Jr., MD, PhD,[1] Keith M. Rich, MD,[1] Franz J. Wippold II, MD,[2] and Ralph G. Dacey Jr., MD[1]

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