Getting back in the saddle

ASHM HIV&AIDS Trainee Case Presentation
Breakfast - 17th September 2025

Dr Joel Le Couteur
Alfred Health

theAlfred

Background

Mr FC* is a 55 year old man living with HIV

Past Medical Hx

- HIV
- Unprovoked Pulmonary Embolus
- Hypertension
- Chronic Obstructive Pulmonary Disease
- Anxiety

Medications

- Biktarvy
- Mirtazapine
- Pantoprazole
- Telmisartan
- Apixaban

Social Hx

- Recently interstate with sister (MTDM)
- No longer drives
- Independent with meds
- NDIS worker assistance M/W/F for cADLs

HIV Hx

Diagnosed

~2010, CD4 20 cells/µL (in Melbourne)

OIs

August 2016 CD4+ 30 cells/µL

PML/PML IRIS, Oesophageal Candidiasis

HIV VL/CD4+

CD4 > 200 cells/µL
HIV VL < 20 copies/ml

ART

TDF/FTC + ATZ/r + RAL

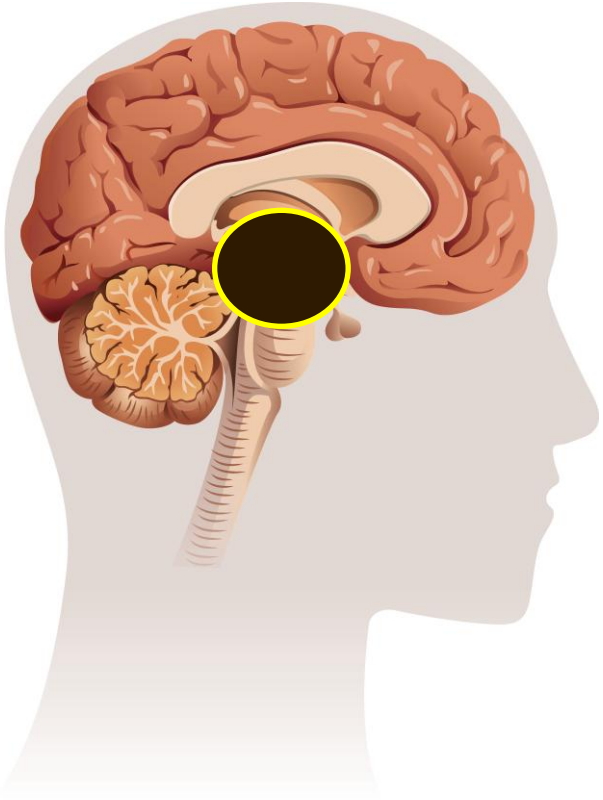
Self-ceased ART ~Nov 2015

ART

2016: Genvoya & Darunavir

2017: Biktarvy

Interstate, September 2024

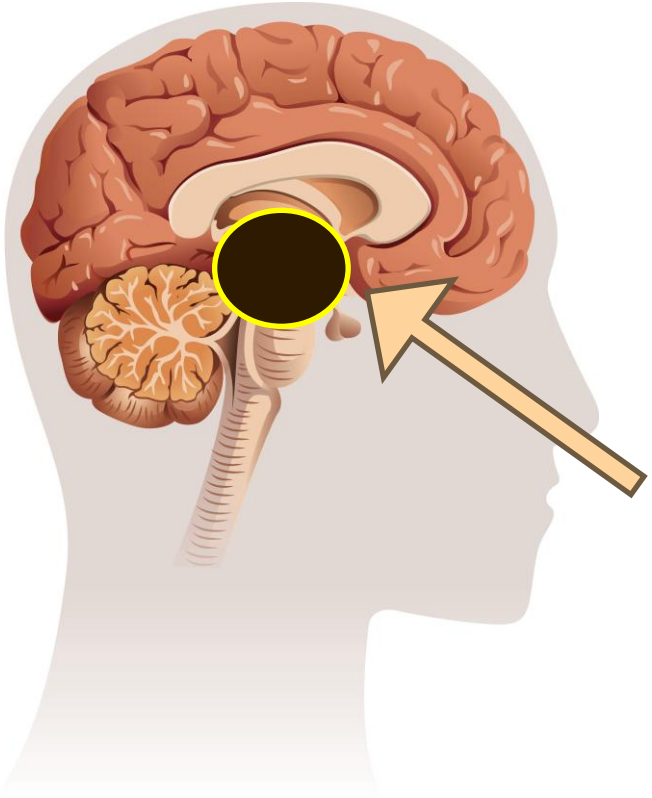


12 month history:

- Diplopia, reduction in peripheral vision
- CD4+ 300 cells/µL, VL< 20 copies/ml

MRI: 30mm suprasellar collection

Collection drained via transsphenoidal approach – frank purulent material observed

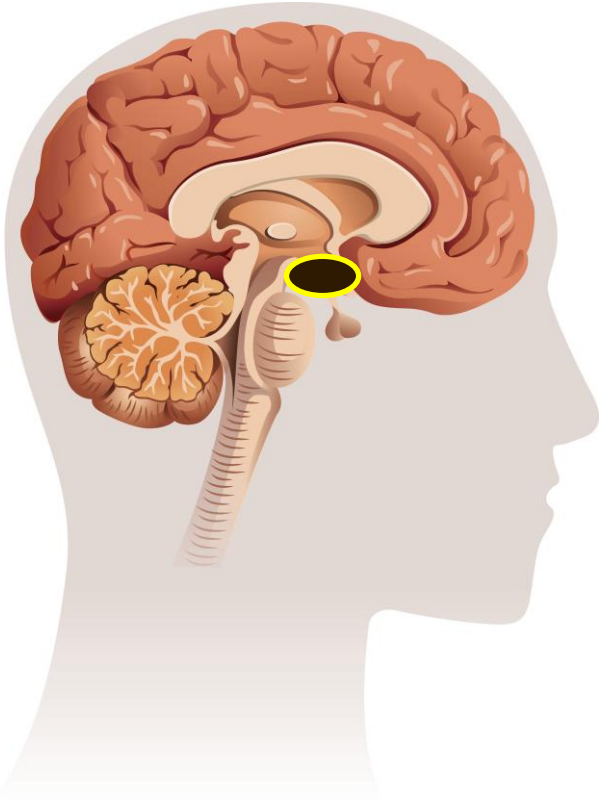


- MCS: **Staph epi** isolated on 1/2 specimens (suspected contaminant)
- Fungal MCS NAD.
- AFB – smear and culture NAD
- 16S and 18S - failed (inhibitors detected)

- Flow cytometry - non diagnostic

- Serology:
  Serum CrAg neg (13/9/24)
  Toxoplasma IgM and IgG neg (13/9/24)
  TB IGRA neg (13/9/24)

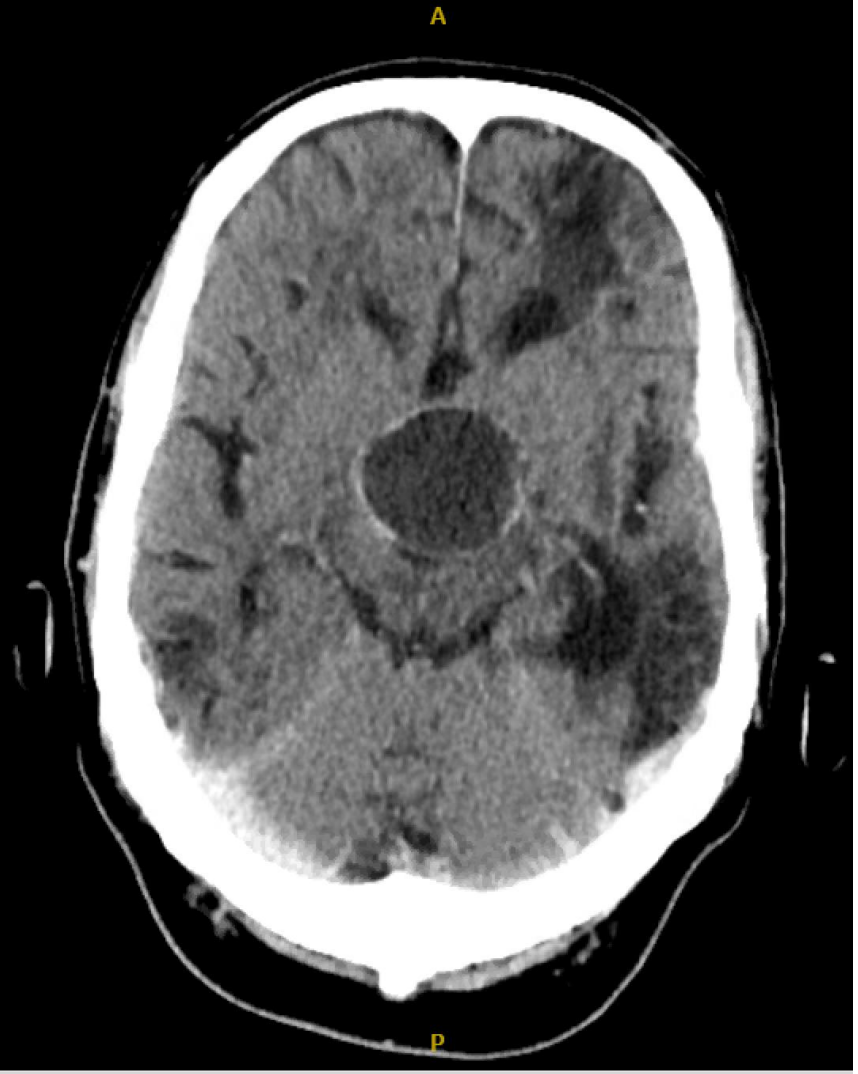
September 2024



- Treated as brain abscess
- 6/52 IV Ceftriaxone /Metronidazole/Vancomycin
- Post op MRI – Improvement
- Symptoms resolved – baseline level of confusion and care requirements
- Moved to Victoria with Carer

Regional Centre, 31/12/24

- 2 months of confusion, headaches and visual changes
- SBP 80 (?spurious), afebrile
- WCC 7, Lymphocytes 1.3, CRP 6
- Mero/Gent/Vanc/Aciclovir in ED



- CT Brain: Hydrocephalus, suprasellar lesion. ?Peripheral calcification. CXR clear
- T/F to The Alfred for urgent Neurosurgical review
- Abx not restarted post arrival to The Alfred

Transfer to The Alfred 1/1/25

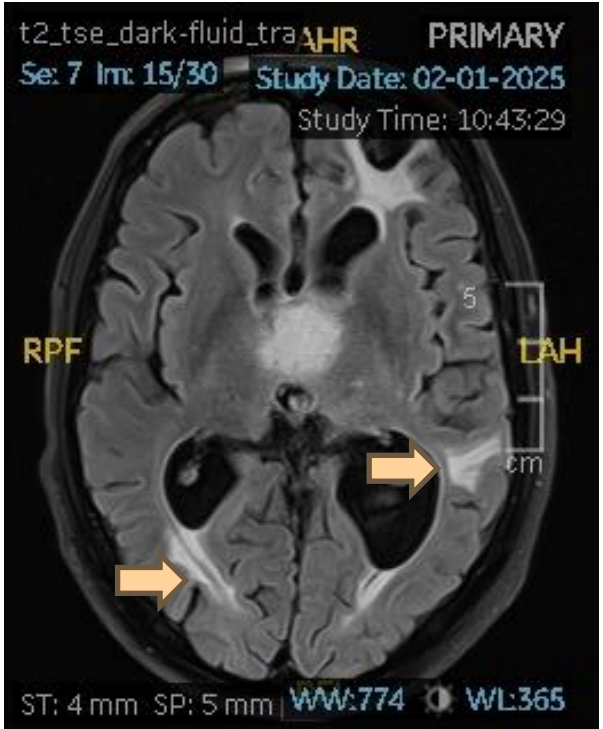
Examination

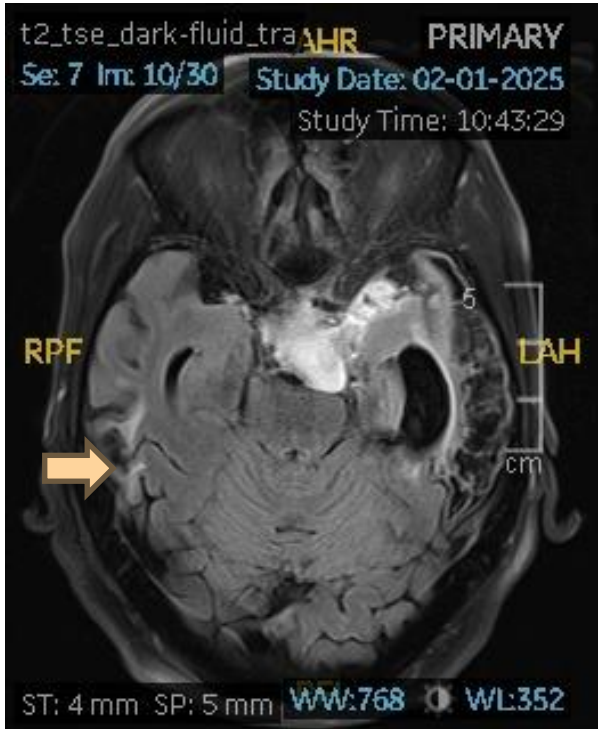
Haemodynamically stable, Afebrile
GCS 14-15 (not orientated to year)
Right homonymous hemianopia

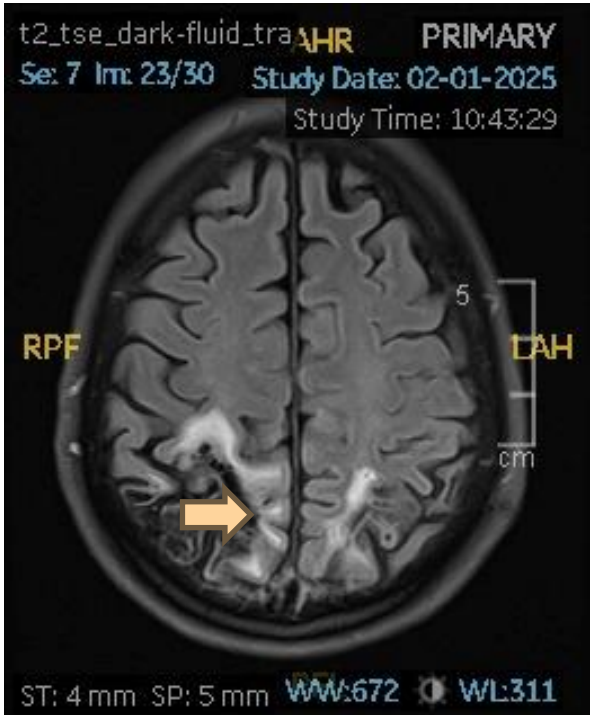
Bloods

WCC 5.57
Lymphs 0.99
CRP 5
CD4 239 cells/µL (19%), HIV VL undetectable.
AM Cortisol 481

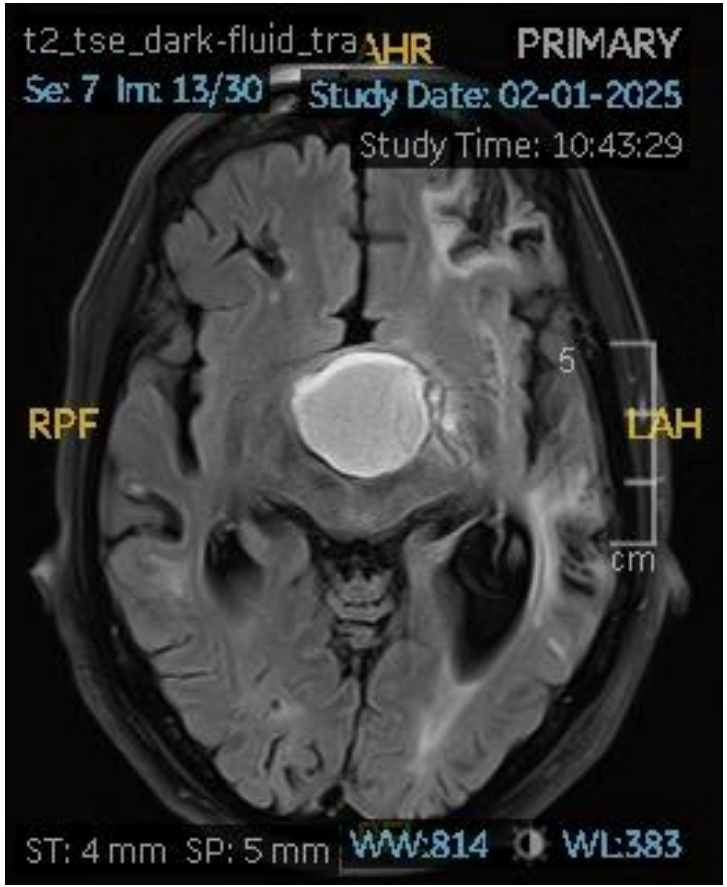
2/1/25
MRI - T2 Flair





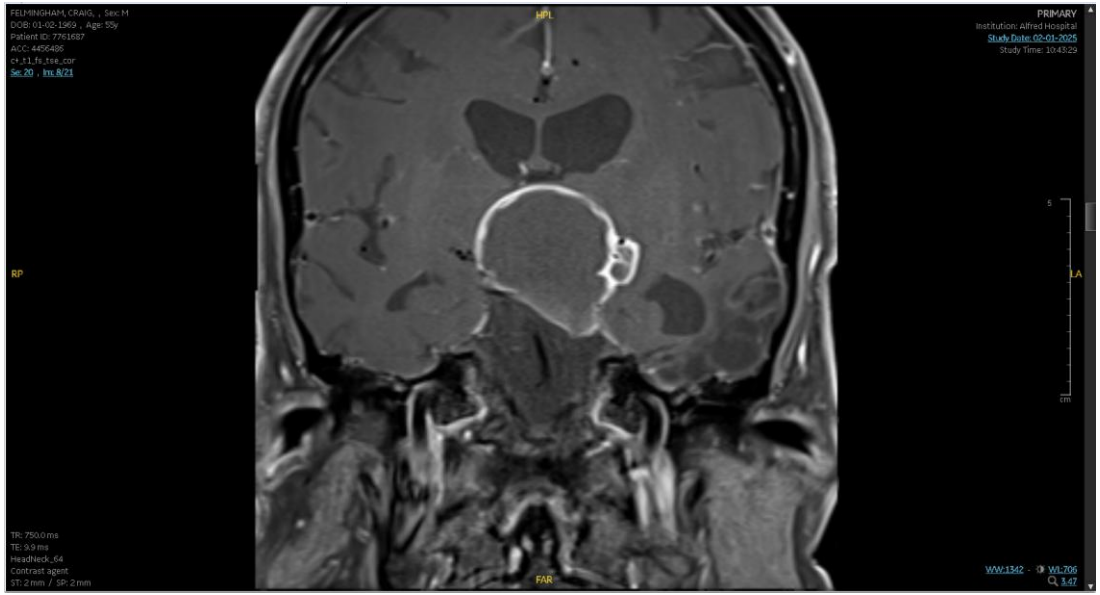


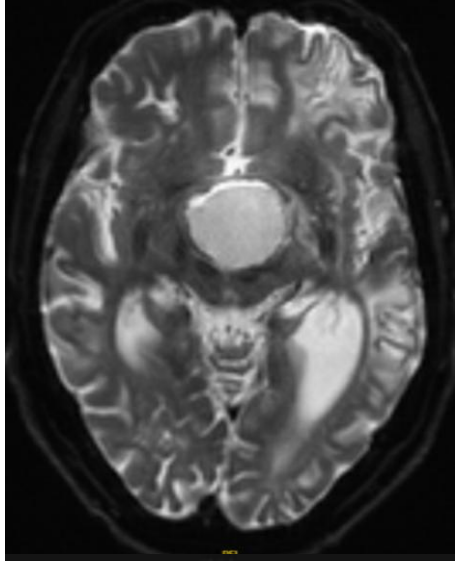
MRI - T2 Flair

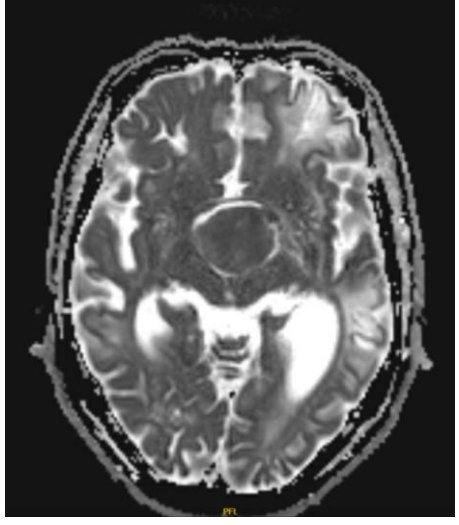


Ring enhancing lesion
37 x 62 x 38 mm

MRI - T1 + c



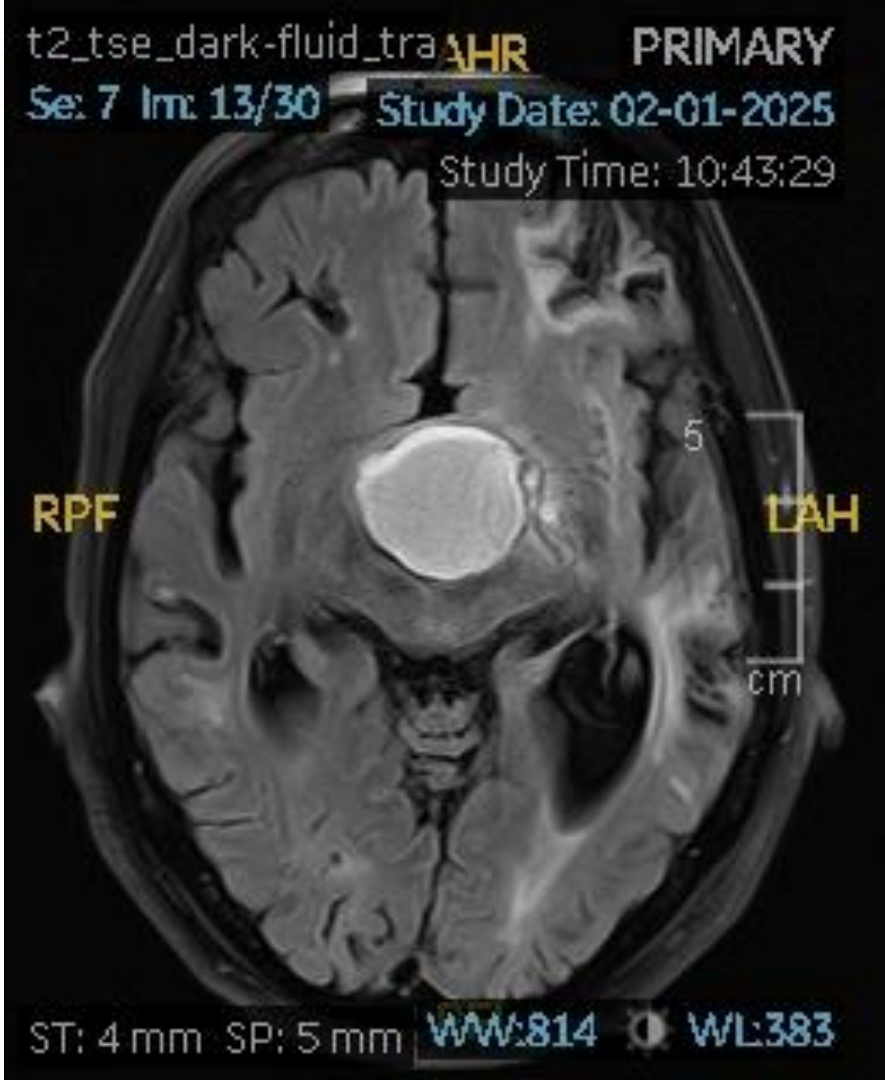




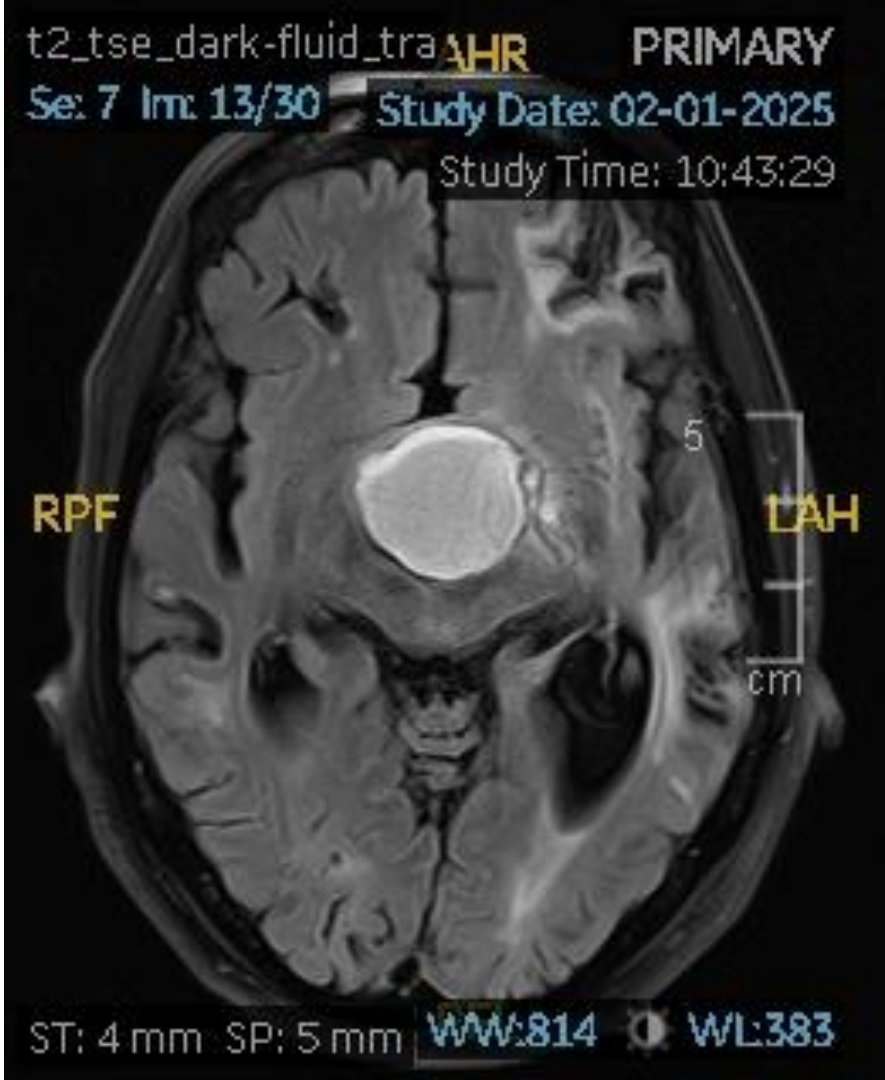
“The significant increase in volume of diffusion restricting material in this region is concerning for infection, either abscess, or infection of a pre-existing lesion.”

Reported urgently to NSx

Query from Neurosurgery: “should we restart antibiotics?”



What do you think this lesion is?



Differential Diagnosis of CNS lesions in PWHIV

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Differentials of CNS Lesions in PWHIV

Infectious

Bacterial:
- Brain abscess
- Nocardia
- Tuberculoma
- Syphilitic gumma

Fungal:
- Cryptococcus

Parasitic
- Toxoplasmosis
- Neurocysticercosis
- Hydatid Cyst

Viral
- CMV
- PML
- HSV, VZV EBV.

Non Infectious

- CNS Malignancy
- Primary CNS Lymphoma
- Pituitary adenoma
- Craniopharyngioma
- Other

Plausible

Infectious

Bacterial:
- Brain abscess
- Nocardia
- ~~Tuberculoma~~
- ~~Syphilitic gumma~~

Fungal:
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Non Infectious

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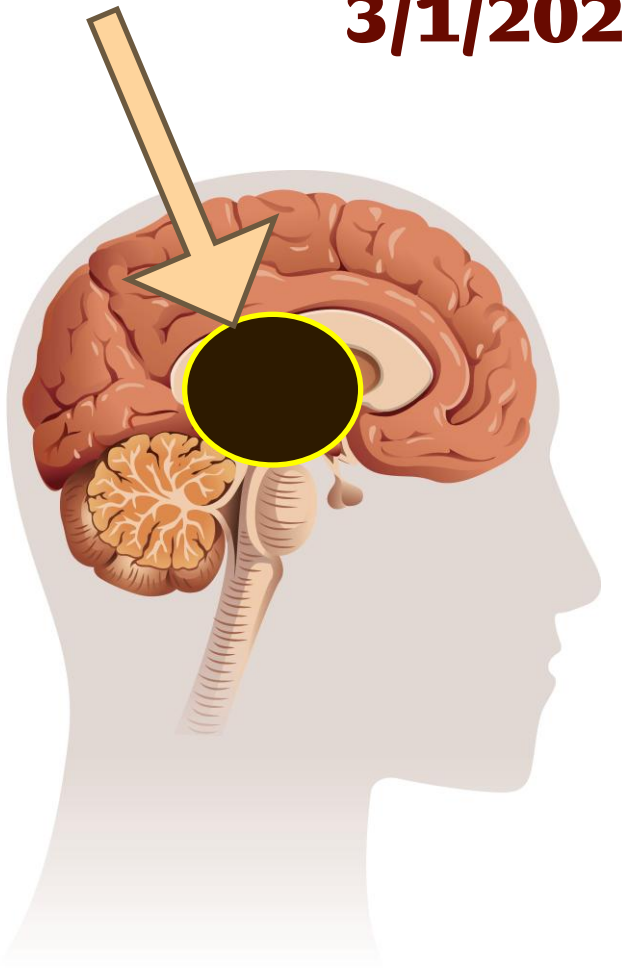
Decision:

- Urgent theatre
- Defer Abx prior
- Micro + Histopath

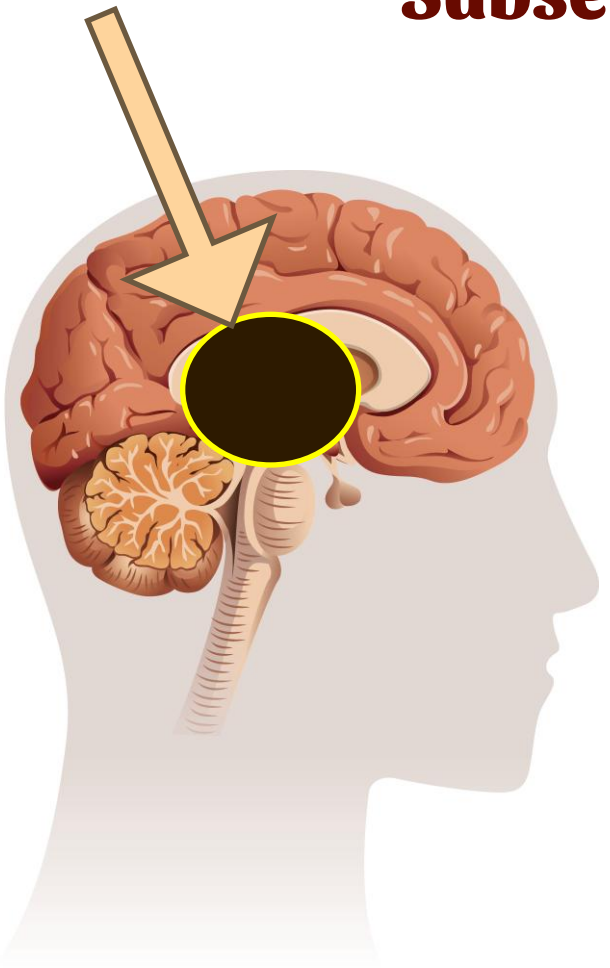
3/1/2025 : Craniotomy



“**Creamy, purulent material** in capsule, thickened congealed purulent material along wall of capsule”

Empirical Ceftazidime /Vancomycin commenced post op in discussion with ID

Subsequent results



Fluid, Tissue, Swab –
2-3+ polymorphs, nil organisms, fungal stains - negative

AFB smear negative

Cytology negative for malignant cells

Bacterial and Fungal MCS – nil growth

Differentials of CNS Lesions in HIV

Infectious

Bacterial:
- Brain abscess?
- Nocardia?
- ~~Tuberculoma~~
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Differentials of CNS Lesions in HIV

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- Other?

Do we commit Mr FC to another 6 weeks of broad spectrum IV Antibiotics?

16S and 18S rRNA PCR still pending...

Histopathology report published – 8/1/25 (D5 post op)

Histopath

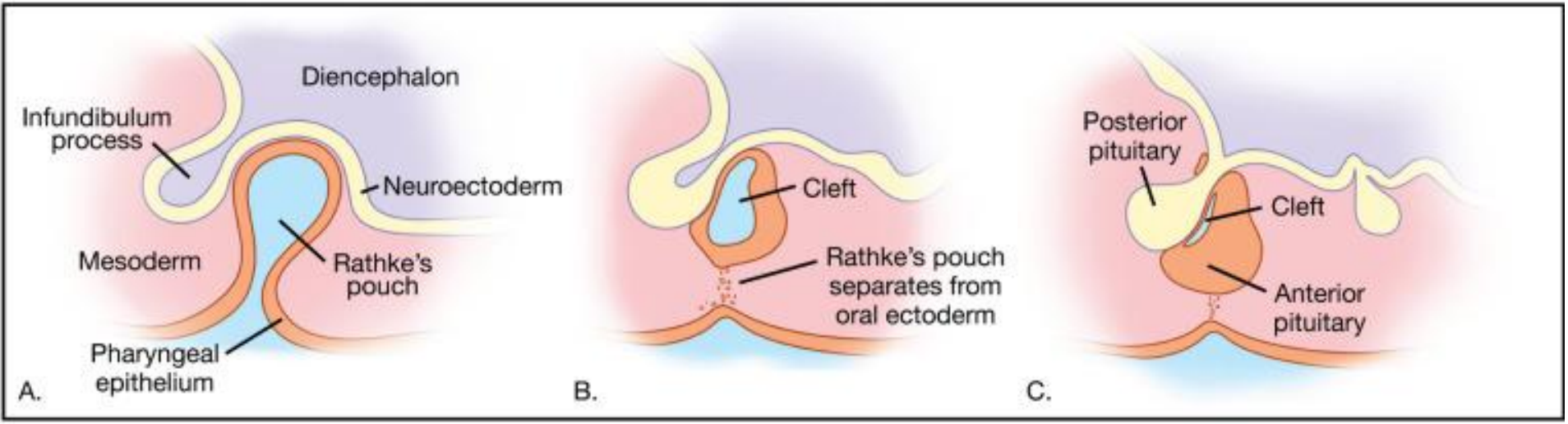
“The sections show **necrotic tissue**, in association with acute inflammation with **fragments of a cyst epithelial lining** appearing as a multilayered epithelium mostly cuboidal to flat epithelial cells. The adjacent connective tissue shows an infiltrate of acute inflammatory cells with focal necrosis.”

Special stains: Gram and silver stains for organisms are negative

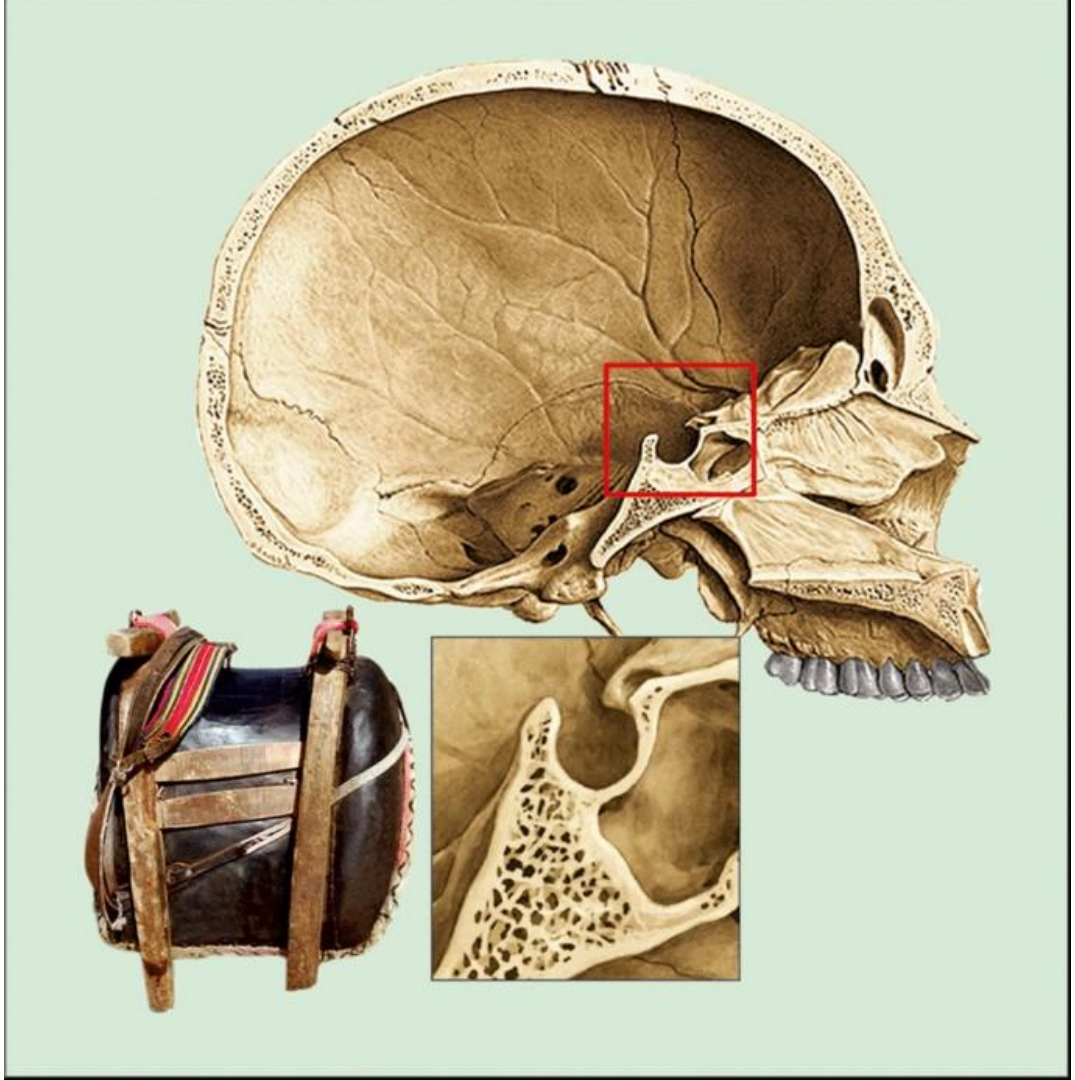
Diagnostic for:
Acutely inflamed Rathke's cleft cyst.

Rathke’s Cleft Cyst

Pituitary Gland Development

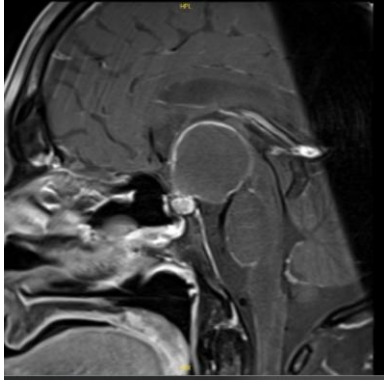


Laws et al. (2013) *Pituitary Disorders: Diagnosis and Management*



Turgut. (2024). *Childs Nerv Syst*

Epidemiology



12–33% of all autopsies!

Symptomatic cases are rare. Mass effect: visual changes, headache, hypopituitarism.

All ages - peak between 30-50

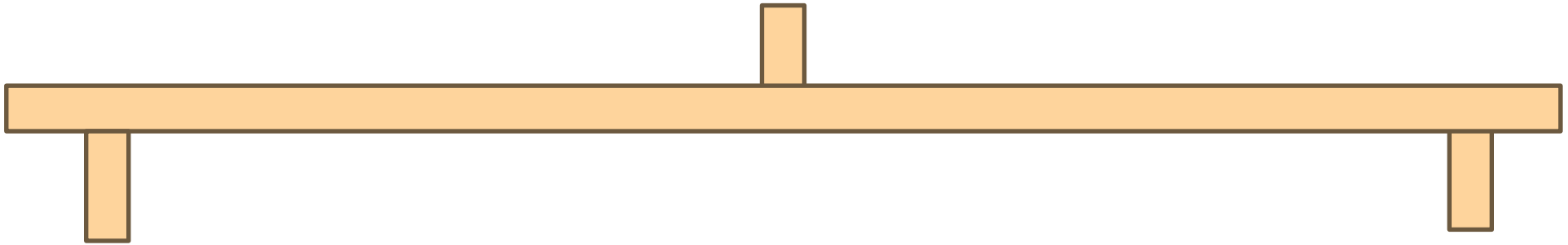
The majority of symptomatic RCCs are 10 - 20mm in diameter - “It is seldom for these tumors … to be more than 4 cm”

Larkin et al. (2014). *Handb Clin Neurol*

Cyst Contents – a spectrum

Mucoid

“thick, mucoid”
”gelatinous"



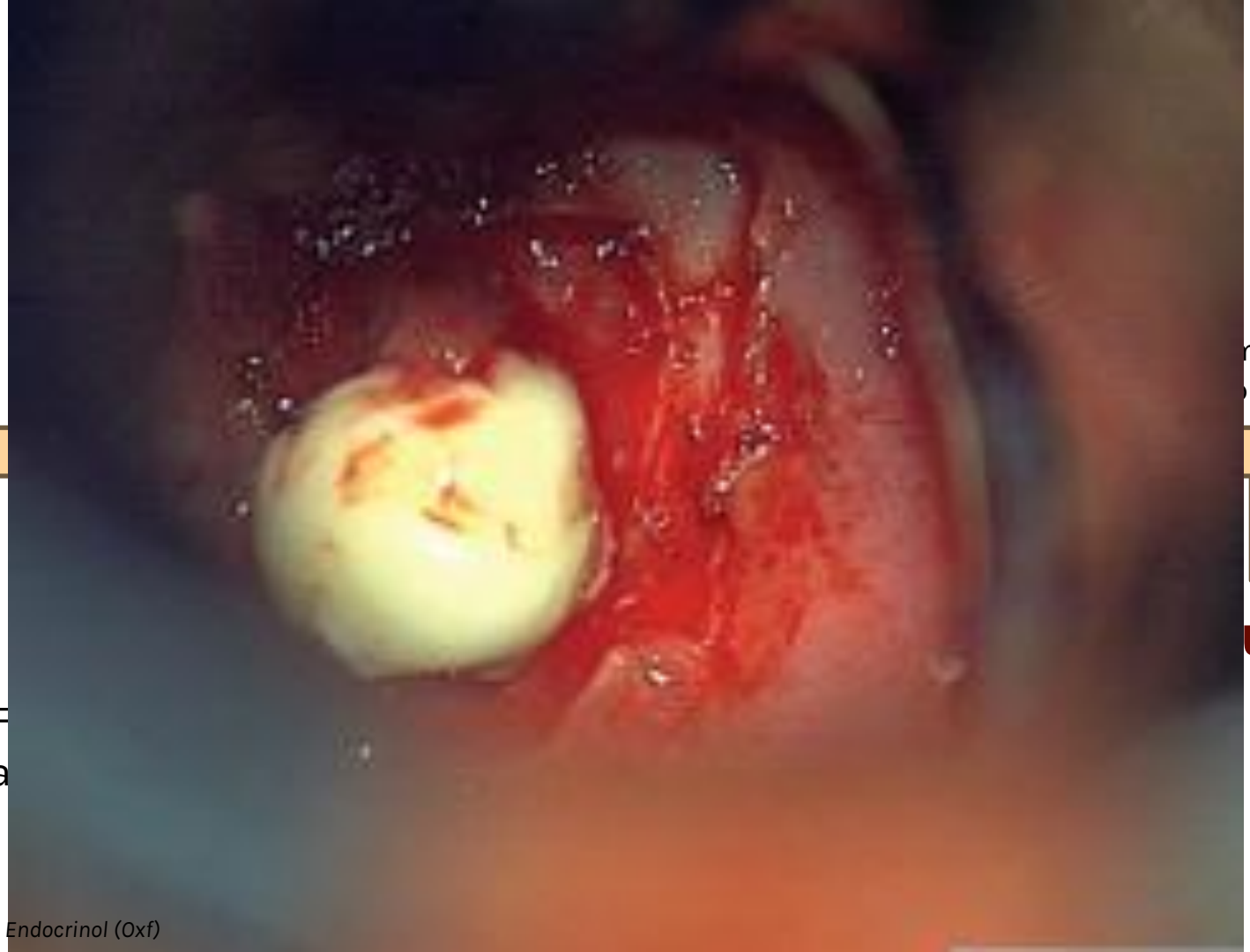
Clear/CSF

“clear like CSF”
”Cerebrospinal fluid like”

Purulent

“milky”
“purulent”

Trifanescu et al. (2012) *Clin Endocrinol (Oxf)*



Clear/CSF

“clear like CSF
”Cerebrospina
fluid like”

milky”
purulent”

ulent

Trifanescu et al. (2012) *Clin Endocrinol (Oxf)*

ESCMID 2024 Guidelines

Samples of pus from the brain abscess should be sent for aerobic and anaerobic cultures as well as histopathological analyses (good clinical practice statement). In endemic areas or according to clin-

ELSEVIER

Clinical Microbiology and Infection
Volume 30, Issue 1, January 2024, Pages 66-89

Guidelines

European society of Clinical Microbiology and Infectious Diseases guidelines on diagnosis and treatment of brain abscess in children and adults

Jacob Bodilsen [1 2 3], Quintino Giorgio D'Alessandris [4 5], Hilary Humphreys [6], Mildred A. Iro [7], Matthias Klein [3 8 9], Katharina Last [3 10], Inmaculada López Montesinos [11 12], Pasquale Pagliano [3 13 14], Oğuz Reşat Sipahi [3 15 16], Rafael San-Juan [12 17 18], Pierre Tattevin [3 19], Majda Thurnher [20], Rogelio de J. Treviño-Rangel [21 22 23 24], Matthijs C. Brouwer [3 25], for the ESCMID Study Group for Infections of the Brain (ESGIB)

To complete the case: Diagnosis – inflamed Rathke's cleft cyst

16S and 18S rRNA NAD. Abx ceased

How did Mr FC go?

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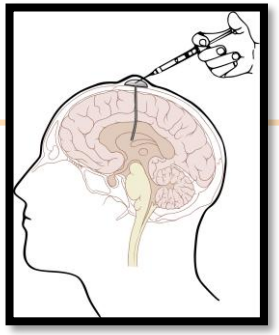
Subsequent events

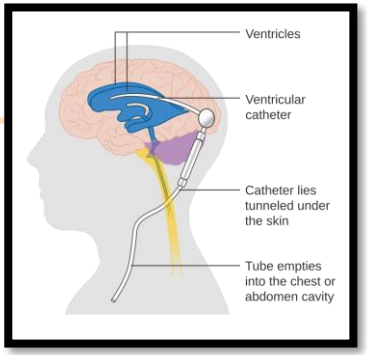
Stable – Discharged to rehab

March 2025 Recrudescence



Rickham's reservoir

Brain tissue
Recultured - NAD



VP Shunt

Brain tissue
Recultured - NAD

Mr FC was then discharged back to regional centre for ongoing rehab – at baseline function and doing well!

theAlfred

Thank you!

- Mr FC and his friends and family
- Prof Jenny Hoy
- Drs Dani Fitzpatrick and Jack Skeggs
- Dr Travis Lines, Ms Judy Frecker
- 7W and FFC nursing and Allied Health staff
- Alfred Infectious Diseases, Neurosurgical and Endocrinology Depts

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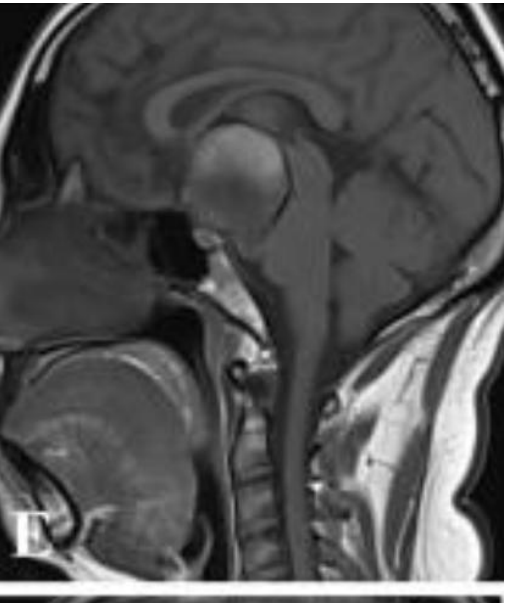
Additional slides

Radiological Features



Variable T1- and T2- intensity (variable cyst content)

Classically not ring enhancing

However: “uninfected RCCs can also exhibit peripheral rim enhancement caused by inflammation or granulation tissue within the cyst wall.”

Sivaraju et al. (2017) *Neuroradiol J*
Brou et al. (2023) *J. Belg. Soc. Radiol*

Symptoms and Management

Symptoms

Mass effect:

Headache

Visual changes

Hypopituitarism

Management

Asymptomatic: Observe

Symptomatic:

Transsphenoidal surgery.

Recurrence rate: 0-42%

Larkin et al. (2014). *Handb Clin Neurol*