

SOLVING THE CLUES FOR THE TRIWIZARD TOURNAMENT

CAN YOU SOLVE THE CASE?



PATIENT INTRODUCTION

A 49-year-old female was admitted from an outside institution on July 3rd with the following symptoms:

- Generalized weakness
- Severe headaches
- Fever (101.3°F) of unknown origin
- Feeling cold/shivering
- Hallucinations/confusion

PATIENT HISTORY

Patient underwent a Posterior Fossa Decompression for Chiari malformation on April 12, 2023 with discharge May 5th.

Normal aftercare and no reported symptoms following the procedure, until her current hospital admission.

Developed a severe headache in early June. Treated with oral steroids, Fioricet and opioids with no improvement.

MEDICAL HISTORY

- Chiari Malformation Type 1
- Mild stroke (early 2023, recovering well w/ no lasting effects)
- Obesity (BMI 44.3)
- Anxiety
- COPD
- CHF
- Hypertension
- Asthma
- Type 2 diabetes

HOSPITAL ADMISSION LABWORK

- Unremarkable CBC, CMP and Coag results upon admission
- Lumbar puncture performed to r/o meningitis

LP Test Results:

Analyte	Result	Normal Range
Protein, CSF	134.1	15.0 – 45.0
Glucose, CSF	22	75 (60% of current blood glucose)
CSF Nucleated Cell Count	1205	0 – 4
CSF RBC Count	4	0 – 0
CSF Neutrophil %	83	N/A
CSF Lymphocyte %	9	N/A
CSF Monocyte/Macrophage %	8	N/A

FANTASTIC YEASTS

THE CRIMES OF ALBICANS

CSF MICROBIOLOGY WORKUP

Cryptococcal Antigen	Negative
Herpes Simplex PCR	Negative
Acridine Orange	Negative
Fungal Culture	I+ Candida albicans
Bacterial Culture	I+ Candida albicans

Identification performed by MALDI-TOF

	MIC	Interp
Amphotericin B	0.500	NI
Micafungin	0.015	S
Voriconazole	0.060	S
Fluconazole	0.500	S

TREATMENT

- Patient started on treatment of IV Fluconazole and Amphotericin B
- Minor hydrocephaly noted and treated with Furosemide
- Fioricet and Acetaminophen continued to reduce headaches

CSF LAB RESULTS FROM JULY 10TH

Analyte	Result	Normal Range
Protein, CSF	196.9	15.0 – 45.0
Glucose, CSF	24	67 (60% of current blood glucose)
CSF Nucleated Cell Count	703	0 – 4
CSF RBC Count	5	0 – 10
CSF Neutrophil %	73	N/A
CSF Lymphocyte %	20	N/A
CSF Monocyte/Macrophage %	7	N/A

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- VP shunt placed to help drain excess fluid
 - July 17th: Patient transferred for further treatment and monitoring
 - Amphotericin continued with addition of Flucytosine
 - Cultures since transfer continue to show clearance of organism
 - CSF values remain abnormal but patient's status improves steadily

CSF LAB RESULTS SINCE DIAGNOSIS

	TNC	RBC	% Segs	% Lymphs	% Mono/ Macros	CSF Protein	CSF Glucose	Culture Results
7/10/23	703	5	73	20	7	196.9	24	C albicans
7/18/23	6	533	54	43	3	69	52	NG
7/19/23	24	510	88	10	2	47	67	NG
7/21/23	243	673	71	29	0	151	49	NG
7/22/23	49	253	82	13	5	84	68	NG
7/23/23	96	260	86	11	2	171	56	NG
7/25/23	34	58	58	29	13	78	70	NG
7/27/23	133	45	91	5	4	42	71	NG
8/14/23	113	26,000	51	38	11	TNP	TNP	NG

DISCHARGE NOTES & FOLLOW-UP

- August 1st: Discharged to home with instructions for continued antifungal treatment regiment
- August 5th: Represented to ED with headache, nausea, dizziness
- Labs showed critical low potassium levels
- Urine cultures also showed pansensitive E coli and K pneumo UTI
- Currently patient is hospitalized undergoing treatment for low potassium levels

EPILOGUE

While reviewing the patient's chart during culture workup, I noted a culture performed on the initial surgical incision site from the original Chiari malformation decompression.

That culture grew *Staphylococcus epidermidis* and...

Candida albicans.

Who knows what other dastardly deeds this feindish fungus has fulfilled...

