You Can Successfully Treat MSSA Brain Abscesses With Oral Co-Trimoxazole

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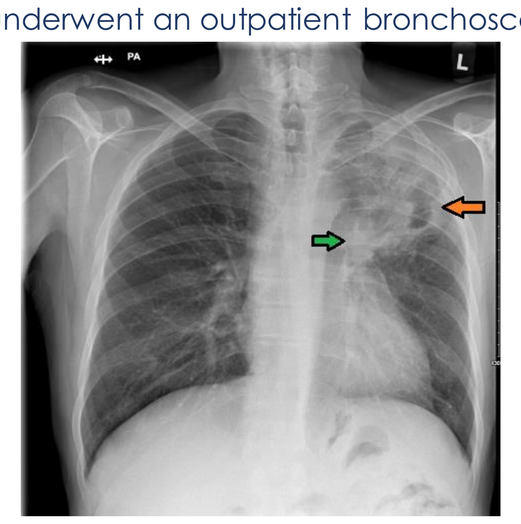
BACKGROUND

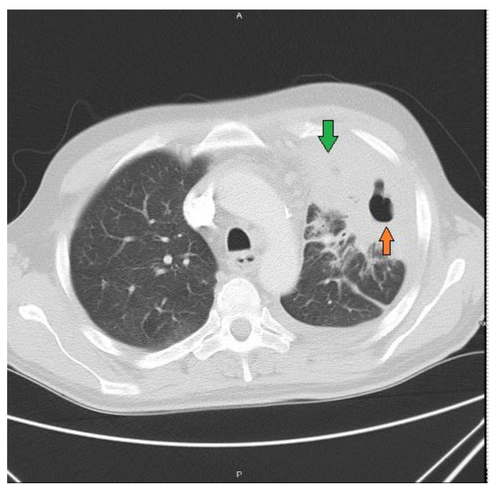
Staphylococcus aureus, a bacterium notorious for its diverse array of clinical manifestations, can present with lung abscess, a condition that often presents diagnostic challenges. This difficulty arises from the overlapping clinical and radiological features shared between lung abscess and lung cancer. Among these manifestations, central nervous system (CNS) involvement stands out as particularly difficult to manage, often resulting in poor clinical outcomes and prolonged hospitalization. Essential treatment strategies involve local source control through methods like aspiration or excision of brain abscess, followed by antimicrobial therapy with good penetration to the central nervous system. CNS involvement may manifest as meningitis, transverse myelitis, ventriculitis, or ***brain abscess***

OUTPATIENT PRESENTATION

A middle-aged man with a history of well-managed schizophrenia and heavy smoking was referred to a rapid access lung cancer clinic due to an abnormal chest X-ray showing a mass in his left upper lung. He had symptoms such as cough, haemoptysis, night sweats, loss of appetite, and weight loss for several weeks.

His GP had treated him with antibiotics earlier for malaise and shivering, which improved the night sweats. Further tests, including a CT scan, revealed a mass in the lung with cavities, along with fluid buildup and lymph node enlargement. He underwent an outpatient bronchoscopy.

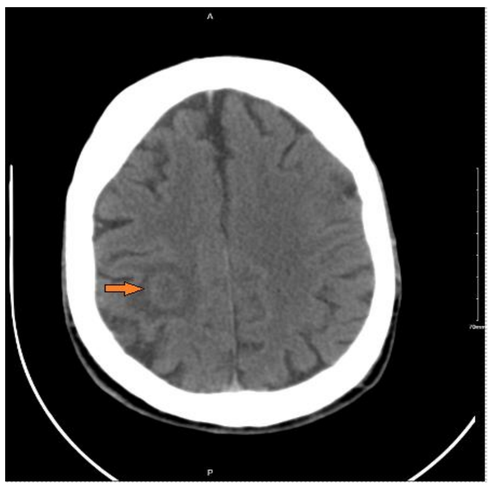


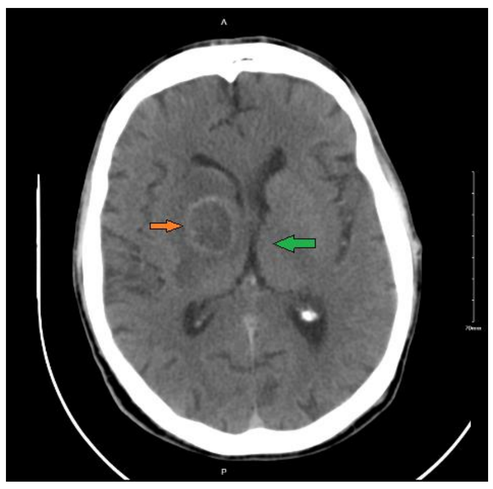


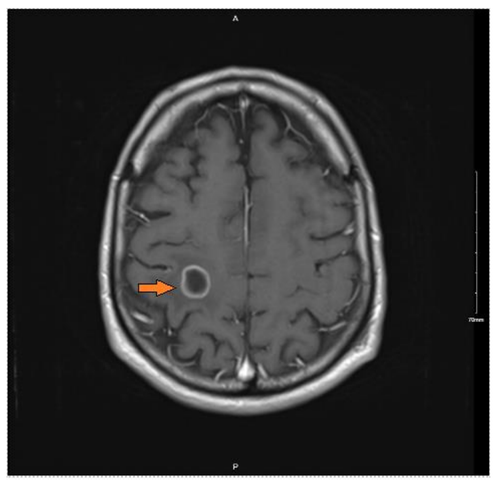
INPATIENT PRESENTATION

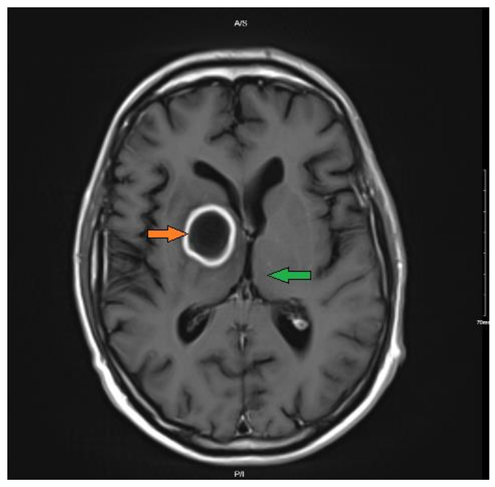
2 days post bronchoscopy, the patient presented to the emergency department with weakness in his left arm, slurred speech, fever, falls, haemoptysis and a reduced level of consciousness. A brain CT scan showed two lesions suggesting metastases, leading to treatment with steroids and antibiotics while awaiting confirmation with an MRI scan.

Biochemically the results were consistent with an inflammatory/infective process. Septic workup was negative. A brain MRI suggested that the 2 lesions found in the brain were more consistent with an abscess rather than brain metastases. The bronchoalveolar lavage yielded moderate growth of ***Staphylococcus Aureus*** proving that the aetiology of the findings is indeed infective in origin rather than oncological.









INITIAL TREATMENT PLAN

The patient was then commenced on Flucloxacillin (2 grams four times daily), Vancomycin (as previously dosed) and Piperacillin/Tazobactam (4.5 grams four times daily) by the primary team.

Infectious Diseases were then consulted an advised for a PICC line insertion and commenced the patient on intravenous ***Flucloxacillin and Vancomycin*** awaiting further sensitivities. Antibiotics were rationallised to Flucloxacillin 2 grams QDS when an MSSA was confirmed and Infective endocarditis was excluded.

COMPLICATIONS

- The patient experienced a ***Penicillin adverse effect*** with a generalized purpuric rash. We then changed the antibiotics to Daptomycin

- ***Increase in size*** of the thalamic abscess upon repeated MRI. ***A Burr hole*** drainage of the thalamic brain abscess was performed.

- The patient was deemed ***not suitable for OPAT*** due to his social isolation and psychiatric history. The patient was at risk of ***discharge against medical advice*** as he was not able tolerate the prolonged inpatient stay.

ORAL CO-TRIMOXAZOLE? YES!

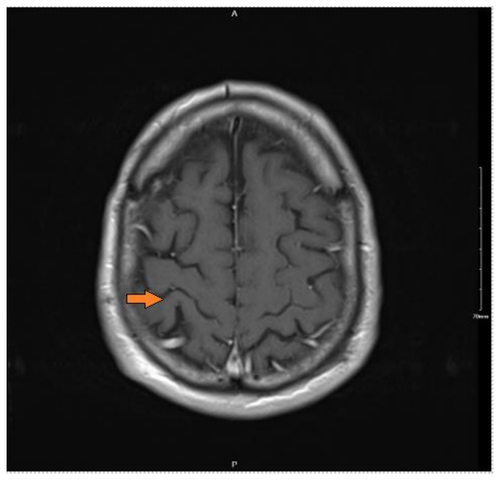
In consultation with the patient, his family and the GP, we decided to commence the patient on **960 milligrams oral Co-trimoxazole twice daily** (Due to his renal function) with close monitoring of renal function facilitated by the GP and attendance at our outpatient clinic alongside interval MRI brain scans for response monitoring.

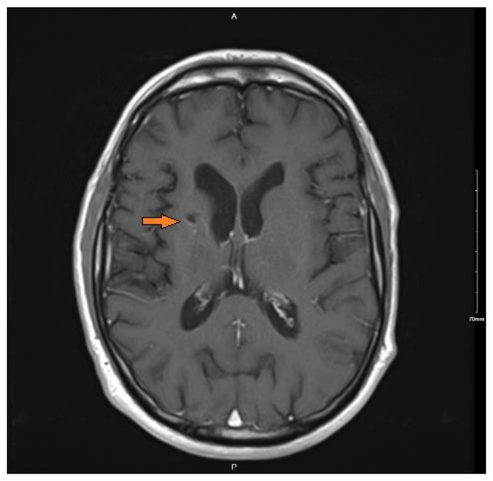
OUTPATIENT FOLLOW UP

The patient was discharged to stay with his sister for assistance. Interval brain MRI scheduled for every ***3 months*** to monitor the progress of the therapy. We followed up with him alternate weeks for 3 months then once a month for one year.

RESULTS

In just 6 months, the patient successfully regained complete control and strength in his limbs and balance. He now manages his daily routines independently, without requiring assistance. A recent MRI taken a year after diagnosis revealed the total resolution of brain abscesses, At present, the patient has ceased antibiotic treatment, experiencing full relief from symptoms and complaints. He has resumed his usual daily activities with no lingering weaknesses or health issues.





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