

Cryptococcal meningitis in an otherwise immunocompetent pregnant woman: Case report

Dr Imogen Thomson¹ Dr Bianca Tellis¹ A/Prof Bronwyn Devine^{1,2}

¹ Royal North Shore Hospital ² IVF Australia



Royal North
Shore Hospital

Case Summary

Introduction

LK, a previously well 33-year-old G1P0, presented to the Emergency Department with new headache and photophobia at 32+3 in an otherwise uncomplicated IVF pregnancy. Initially thought to have migraine-related symptoms, she was discharged. On representation, she had developed new neck stiffness, non-blanching rash, fever and hypertension to 160/90 mmHg. LK had no recent overseas travel but described home renovations with exposure to mouldy wood and soil in Sydney, Australia.

Investigations

- *Blood tests*: CRP 226, WCC 13.9, HIV serology negative, pre-eclampsia screen negative
- *MRI brain*: Multiple parenchymal cryptococcomas
- *Lumbar puncture*: Opening pressure 31cm (raised), CSF culture positive for *C. gatti*

Management

Betamethasone was administered for fetal lung maturation, and LK received IV amphotericin B and oral flucytosine for eight weeks. Serial lumbar punctures were performed to manage raised ICP. Hypertension was attributed to meningitic cerebral agitation and resolved with treatment of meningitis alone. LK delivered a healthy term baby boy via planned caesarean section. She was changed to an extended course of fluconazole with multidisciplinary follow-up postpartum.

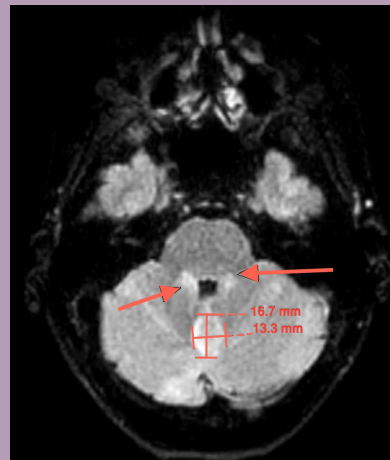
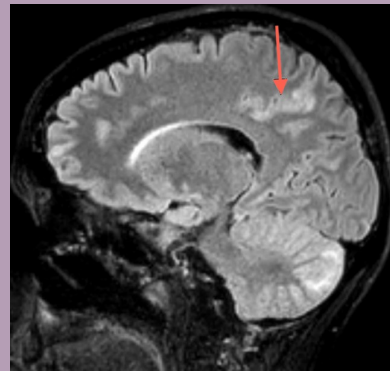


Figure 1: Cryptococcomas identified on LK's MRI brain

Case Discussion

Discussion

Headache is a common reason for antenatal review in pregnancy, and migraine and pre-eclampsia were the initial primary differential diagnoses prior to LK developing localising infective symptoms. *C. gatti* is endemic to some tropical and subtropical regions of Australia due to the distribution of host eucalyptus trees,¹ but infection with meningitis and particularly associated cryptococcoma formation is rare. However, this carries a high mortality rate of over 13%,² and pregnancy-related immunomodulation may increase vulnerability to such atypical infections.

Learning Points

- Pregnancy may heighten susceptibility to infection, and it is important to evaluate for this differential in the context of pregnancy-related immunomodulation
- Local pathogen endemicity and incidental or occupational exposures are important to consider when evaluating for infection in pregnancy

References

¹ Vic Health. *Cryptococcosis*. 2015.

<https://www.health.vic.gov.au/infectious-diseases/cryptococcosis>

² Chen et al. *Clinical manifestations of C. gatti: Determinants of neurological sequelae and death*. 2012. Clin Infect Dis.