

Multiple ring-enhancing lesions in a previously healthy teen

Colton J Junod, BS*; Richard B Rodgers, MD; Thimjon C Ferguson, MD

***Corresponding Author: Colton J Junod**

Indiana University School of Medicine, Terre Haute, IN, USA

Email: cjunod@iu.edu

Description

An 18-year-old female presented to a rural hospital emergency department complaining of headache, vomiting, productive cough, lethargy and dysarthria over the previous 24 hours. The patient was diagnosed with mononucleosis one week prior by her primary care physician due to her experiencing several weeks of fevers and fatigue. Physical examination was significant for generalized weakness and erythematous macular lesions on the medial thighs which was reported to be chronic. The patient and her family reported that the patient had been outdoors quite a bit recently camping, hiking, and swimming in lakes.

The patient underwent CT imaging of the head due to her presenting symptoms. The imaging found multiple marked hypodense areas and suggested MRI. The MRI found numerous 5 to 10 millimeter ring-enhancing lesions scattered throughout the brain parenchyma which suggested infectious process.

The patient was placed on broad-spectrum antibiotics and transferred to a university health center to receive specialized care. A comprehensive work-up and history was performed, and it was found that the patient had recent exposures to rabbits on the family farm, mosquitoes and ticks while camping, swimming in lakes and rivers, and recent travel across the Midwest and to Sonoma County, CA.

A chest CT was significant for mediastinal lymphadenopathy and right-sided pulmonary nodules. On day three of hospitalization, the patient had an episode of unresponsiveness with seizure-like activity and right-sided gaze. The patient was emergently intubated, and a bronchoscopy was performed to biopsy mediastinal lymph nodes which revealed purulent material that was sent for culture. Multiple antifungal and antiprotozoal medications were started on the patient due to the wide differential of infectious processes. The Centers for Disease Control was consulted and recommended a brain biopsy which was done on hospitalization day six. The biopsy cultures were negative for organisms; however, the patient had been receiving multiple days of antimicrobial treatment. The patient was extubated on day eight of hospitalization with improved mental status.

The only culture positive for an organism was the mediastinal abscess which grew viridans streptococci. This positive culture, along with the negative serologies for other infectious organisms over the course of the patient's hospitalization, supported the diagnosis of hematogenous seeding of the brain with viridans streptococci [1-4]. The patient continued to improved and was discharged to rehabilitation with outpatient follow-up.

Figures

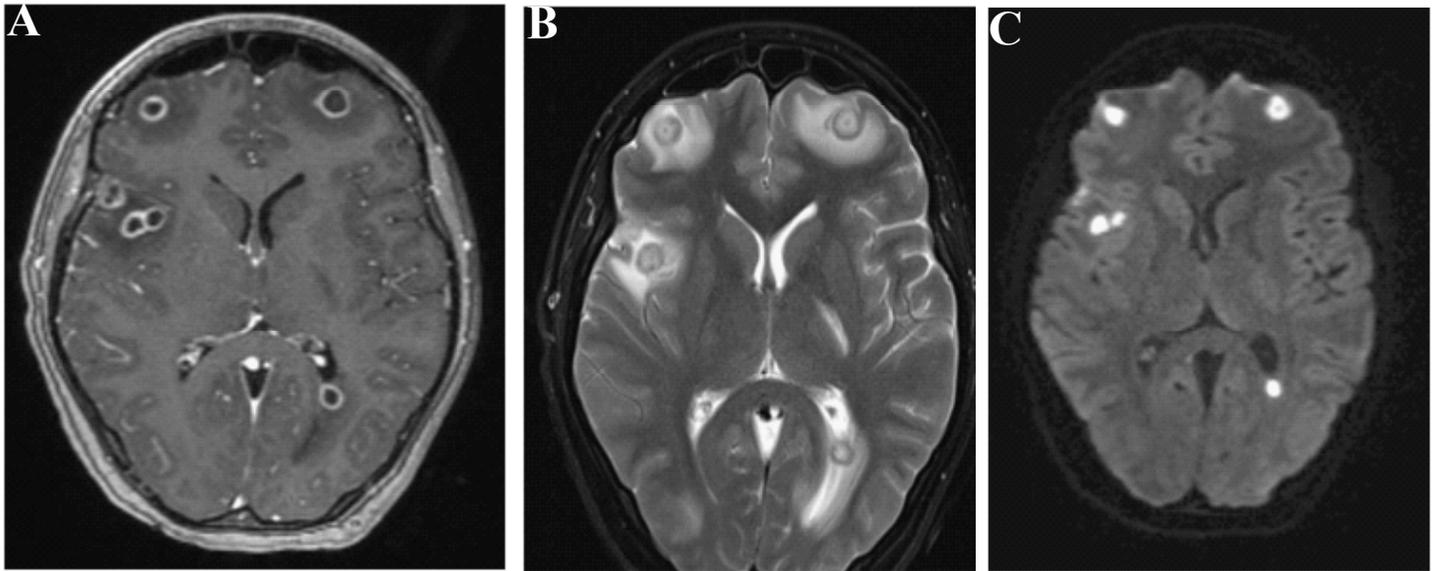


Figure 1: MRI Imaging. A) T1-weighted. B) T2-weighted. C) Trace diffusion-weighted

References

1. Brouwer MC, Tunkel AR, McKhann GMI, van de Beek D. Brain Abscess. <https://www.nejm.org/doi/10.1056/NEJMra1301635>. doi:10.1056/NEJMra1301635
2. Garg RK, Sinha MK. Multiple ring-enhancing lesions of the brain. *Journal of Postgraduate Medicine*. 2010; 56(4): 307.
3. Patel K, Clifford DB. Bacterial brain abscess. *Neurohospitalist*. 2014; 4(4): 196-204.
4. Viridans streptococci - An overview | ScienceDirect Topics. <https://www.sciencedirect.com/topics/medicine-and-dentistry/viridans-streptococci>. Accessed Sept 2, 2019.

Manuscript Information: Received: December 09, 2019; Accepted: April 17, 2020; Published: April 30, 2020

Authors Information: Colton J Junod, BS^{1*}; Richard B Rodgers, MD²; Thimjon C Ferguson, MD³

¹Indiana University School of Medicine, Terre Haute, IN, USA

²Indiana University School of Medicine, Dept of Neurological Surgery, Indianapolis, IN, USA

³Good Samaritan Hospital, Department of Emergency Medicine, Vincennes, IN, USA

Citation: Junod CJ, Rodgers RB, Fergusin TC. Multiple ring-enhancing lesions in a previously healthy teen. *Open J Clin Med Case Rep.* 2020; 1654.

Copy right statement: Content published in the journal follows Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>). © Junod CJ 2020

About the Journal: Open Journal of Clinical and Medical Case Reports is an international, open access, peer reviewed Journal focusing exclusively on case reports covering all areas of clinical & medical sciences.

Visit the journal website at www.jclinmedcasereports.com

For reprints and other information, contact info@jclinmedcasereports.com