



# No Cards on the Farm: A Case of Cerebral Nocardiosis

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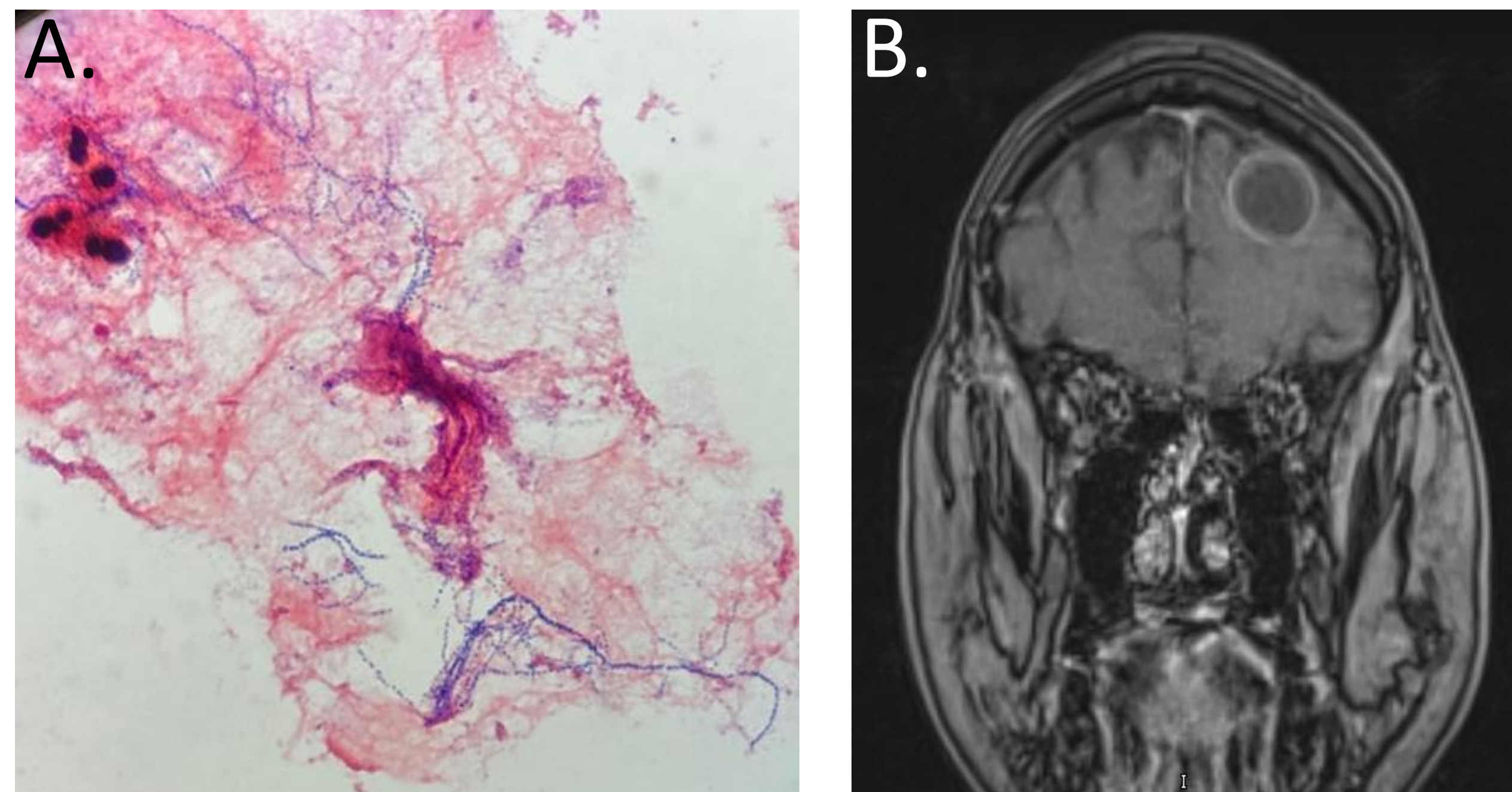
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## Introduction

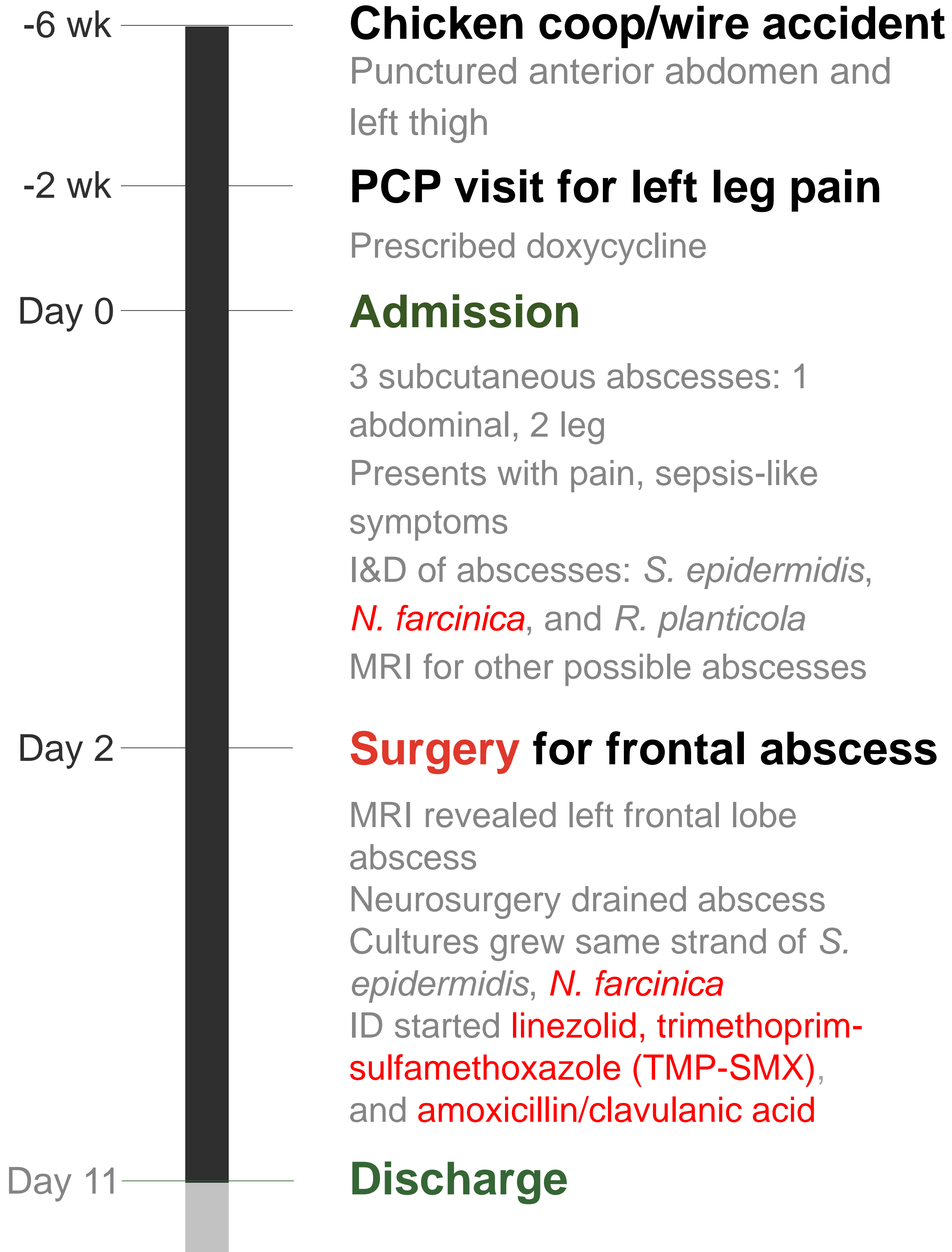
- *Nocardia farcinica* is a gram-positive, catalase-positive, filamentous, rod-shaped bacteria that is found in organic soil matter.<sup>1</sup> Infections of the brain parenchyma by *Nocardia* are rare and can pose a challenge to treat.
- Cerebral nocardiosis represents 2% of all cerebral abscess cases.<sup>2</sup>
- Most *Nocardia spp.* are sensitive to a combination of multiple antibiotics (TMP-SMX, carbapenems, third generation cephalosporins, linezolid).<sup>2,3</sup>
- The empiric treatment for disseminated nocardiosis includes TMP-SMX with at least one other antibiotic.<sup>3</sup>



**Image 1: Cultured *Nocardia farcinica* and patient's MRI scan.**

**A.** Biopsy of the frontal abscess when cultured grew *Nocardia farcinica*. **B.** T1 MRI reveals a 2.3 cm ring enhancing lesion in the patient's left frontal lobe.

## Case Presentation



## Discussion

- Because this patient had a cerebral abscess, TMP-SMX was chosen due to its excellent central nervous system penetration.
- Carbapenems (imipenem) would be contraindicated in this patient due to their increased seizure risk.
- The patient had risk factors for developing a frontal abscess such as recurrent sinus infections and numerous dental issues.
- It is suspected that the *Nocardia* spread to the cranium hematogenously.
- This case illustrates the importance of determining the causative organism for a given infection. A thorough history and critical communication between provider and laboratory are necessary to support antibiotic stewardship and provide patient-centered care.

## References

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2. Baldawa S, Nayak N, Kukreja S, D'souza D, Diyora B, Sharma A. Cerebral nocardiosis. (2014). *Asian Journal of Neurosurgery*, 9(4), 245–245. doi:10.4103/17935482.146661
3. Paige E, Spelman D. (2019). Nocardiosis: 7-year experience at an Australian tertiary hospital. *Internal Medicine Journal*, 49(3), 373-379. doi: 10.1111/imj.14068.