

Case 2003-9

Submitted by:

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Clinical history:

This 25-year-old man, a peripatetic world traveler, presented to hospital four days after returning to Canada following a two-month tour of Costa Rica, Panama and the Caribbean. His complaints consisted of headache, nausea and vomiting, paresthesia of the right arm and leg, and aphasia for approximately three weeks. Because of fever and chills, he had seen a physician in Costa Rica, who prescribed Clarithromycin, but no clinical improvement ensued. Relevant laboratory investigations revealed a white blood cell count of  $13.3 \times 10^9/L$  (74% neutrophils) and an ESR of 5 mm/hr (normal 0-10), while examination of the cerebrospinal fluid disclosed 15 white blood cells  $\times 10^6/L$ , 80 red blood cells  $\times 10^6/L$ , and a glucose of 4.7 mmol/L (normal 2.2-4.1). An MRI scan showed on T1 weighted images a hypointense lesion in the left temporal region with heterogeneous gadolinium enhancement but a CT guided stereotactic needle biopsy yielded only neuroglial tissue with chronic inflammatory cell infiltrates suggestive of encephalitis. Nonetheless, PCR analysis for *Herpes simplex* types I and II was negative, as were serologic tests for arboviral antibodies.. The patient returned one month later with worsening symptoms and a MRI scan showed enlargement of the lesion to involve the entire left temporal lobe. He subsequently underwent a left temporal lobectomy for the purpose of biopsy.

Material submitted:

- Slide transparency of the repeat MRI scan, coronal plane of T1 weighted image, post-gadolinium.
- Representative H and E stained section from the open biopsy of the mass in the left temporal lobe.

Points for discussion:

1. What, if any, additional information should be sought from the patient?
2. What laboratory test(s) would be of help in confirming a diagnosis?
3. Pathologic diagnosis?