

**Case 22 (July 17 2008):** [N Engl J Med. 359\(3\):294-303](#)

**Demographic:** Female, 52 years, Not Pregnant, America North, General speciality

***Clinical features extracted from the case and entered into the query box:***

fever  
confusion  
fatigue  
mastoid tenderness  
tongue numbness  
leg myalgias  
headache  
tachypneic  
sinus tachycardia  
seizure  
insect bites  
positive babinski sign

***Synonyms used by Isabel for the above query:***

fatigue  
seizure  
sinus tachycardia  
fever  
headache  
confusion

**STOP !**

**Before you read further you might want to construct your own:**

- Complete differential diagnosis
- Final diagnosis

**In the following section you will find:**

- The differential diagnosis constructed by the MGH panel
- The final diagnosis of the case
- Which of the MGH panel differential diagnoses did Isabel contain
- Did Isabel suggest the Final diagnosis

***Differential Diagnoses considered by the MGH panel:***

Bacterial Meningitis  
Lyme Disease  
Aseptic Meningitis  
Herpes Simplex Virus  
West Nile Virus

***Final Diagnosis of the case according to NEJM:***

Eastern Equine Encephalitis

***Differential Diagnoses of the cases given by Isabel:***

Bacterial Meningitis – under Infectious diseases heading  
Lyme Disease – under Infectious diseases heading  
Aseptic Meningitis – under Infectious diseases heading  
Herpes Simplex Virus – under Infectious diseases heading  
West Nile Virus – under Infectious diseases heading

***Was the final diagnosis given by Isabel:***

Yes, Eastern Equine Encephalitis under Viral Meningoencephalitis – under Infectious diseases heading

**Isabel Differential:**

- INFECTIOUS DISEASES >> click to collapse	+ NERVOUS SYSTEM DISORDERS << click to expand
<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <a href="#">Influenza and Parainfluenza Viruses</a> <span style="float: right;">? RD</span></li> <li><input checked="" type="checkbox"/> <a href="#">Bacterial Meningitis</a> <span style="float: right;">? RD</span></li> <li><input type="checkbox"/> <a href="#">Viral Meningoencephalitis</a> <span style="float: right;">○ RD</span></li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <a href="#">Cerebral Sinus Venous Thrombosis</a> <span style="float: right;">? RD</span></li> </ul>
NEUROMUSCULAR DISORDERS	
<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <a href="#">Polyneuropathy Disorders</a> <span style="float: right;">? RD</span></li> </ul>	
TOXICOLOGY	
<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <a href="#">Radioactive Isotopes</a> <span style="float: right;">? RD</span></li> </ul>	
+ RESPIRATORY DISORDERS << click to expand	
+ CARDIAC DISORDERS << click to expand	
+ GYNECOLOGICAL DISORDERS << click to expand	
+ IMMUNOLOGIC SYSTEM << click to expand	

  

<p><b>Why did this diagnosis come up ?</b> <span style="float: right;">x</span></p> <p><b>We matched the terms:</b> lethargy   tired   convulsions   seizures   seizure   st   sinus tachycardia   sign   fever   fevers   headache   headaches   confusion   bite   bites   babinski</p> <hr/> <p><b>Degree of match between query entered and isabel database (Not clinical probability): 54%</b></p>
<ul style="list-style-type: none"> <li>- Aseptic Meningitis</li> <li>- California / La Crosse Encephalitis</li> <li>- Eastern Equine Encephalitis</li> <li>- HSV Encephalitis</li> <li>- Measles Encephalitis</li> <li>- Mumps Meningitis / Encephalitis</li> <li>- Varicella Encephalitis</li> <li>- Vogt-Koyanagi-Harada Syndrome</li> <li>- Western Equine Encephalitis</li> </ul>
<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <a href="#">Tuberculosis</a> <span style="float: right;">? RD</span></li> <li>  <a href="#">Meningococcal Disease</a> <span style="float: right;">? RD</span></li> <li><input checked="" type="checkbox"/> <a href="#">Yersinia Infection</a> <span style="float: right;">? RD</span></li> <li><input checked="" type="checkbox"/> <a href="#">Toxic Shock Syndrome</a> <span style="float: right;">? RD</span></li> <li><input type="checkbox"/> <a href="#">Arboviral Infections / Encephalitides</a> <span style="float: right;">? RD</span></li> <li>  - Colorado Tick Fever</li> <li>  - Oklahoma Tick Fever</li> <li>  - Powassan Encephalitis</li> <li>  - St Louis Encephalitis</li> <li>  - West Nile Encephalitis</li> <li>  <a href="#">Lyme Disease</a> <span style="float: right;">? RD</span></li> <li>  <a href="#">Rocky Mountain Spotted Fever</a> <span style="float: right;">? RD</span></li> <li><input checked="" type="checkbox"/> <a href="#">Brucellosis</a> <span style="float: right;">? RD</span></li> </ul>