

**Case 3 (January 22 2009):** [N Engl J Med. 360\(4\):398-407](#)

**Demographic:** Male, 9 months, America North, General speciality

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

**box:**

bulging fontanelle  
nasal congestion  
fever  
watery diarrhea  
seizures  
apnea  
hypocalcemia  
hypophosphatemia  
elevated alkaline phosphatase level  
anemia

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

apnea  
hypocalcemia  
nasal congestion  
seizures  
watery diarrhea  
anemia  
fever  
bulging fontanelle  
hypophosphatemia

**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

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- Did Isabel suggest the Final diagnosis

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

Meningitis

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

Rickets due to Vitamin D Deficiency

**Differential Diagnoses of the case as given by Isabel:**

Meningitis – under Infectious diseases heading

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

Yes, Rickets under Orthopedic disorders

**Isabel Differential:**

+ INFECTIOUS DISEASES << click to expand	+ ORTHOPEDIC DISORDERS << click to expand
<input type="checkbox"/> <a href="#">Influenza and Parainfluenza Viruses</a> <span style="float: right;">? RD</span> <input type="checkbox"/> <a href="#">Bacterial Meningitis</a> <span style="float: right;">? RD</span> <input type="checkbox"/> <a href="#">Streptococcus Pneumonia Infection</a> <span style="float: right;">? RD</span>	<input checked="" type="checkbox"/> <a href="#">Vit D Deficient Rickets / Osteomalacia</a> <span style="float: right;">RD</span> <div style="border: 1px solid black; background-color: #fff9c4; padding: 5px; margin: 5px 0;"> <p><b>Why did this diagnosis come up ?</b></p> <p>We matched the terms: hypocalcaemia   fits   anaemia   anaemic   hypophosphataemia   hypophosphate   alkaline   alkaline   phosphatas   phosphatase   level</p> <p>Degree of match between query entered and isabel database (Not clinical probability): 60%</p> </div> <input type="checkbox"/> <a href="#">Osteopetrosis</a> <span style="float: right;">? RD</span> <input type="checkbox"/> <a href="#">Vit D-Dependent Rickets</a> <span style="float: right;">? RD</span> <input checked="" type="checkbox"/> <a href="#">X-linked Hypophosphatemic Rickets</a> <span style="float: right;">? RD</span>
+ NERVOUS SYSTEM DISORDERS << click to expand	+ ENDOCRINE SYSTEM << click to expand
<input type="checkbox"/> <a href="#">Epilepsy &amp; Seizure Disorders</a> <span style="float: right;">? RD</span>	<input type="checkbox"/> <a href="#">Hyperthyroidism</a> <span style="float: right;">? RD</span>
+ NEPHROLOGY << click to expand	+ NEOPLASTIC DISEASES << click to expand
<input type="checkbox"/> <a href="#">Renal Failure</a> <span style="float: right;">? RD</span>	+ METABOLIC DISEASES << click to expand
+ LIVER DISORDERS << click to expand	+ RESPIRATORY DISORDERS << click to expand
+ GASTROINTESTINAL DISORDERS << click to expand	+ IMMUNOLOGIC SYSTEM << click to expand
+ TOXICOLOGY << click to expand	+ DERMATOLOGY << click to expand
+ NUTRITIONAL DISORDERS << click to expand	
+ TRAUMA INJURIES << click to expand	