
**Demographic:** Female, 61 yrs, Not pregnant, America North, General speciality

**Clinical features extracted from the case and entered into the query box:**
- seizure
- short stature
- hearing loss
- lactic acidosis
- hypertension
- residual aphasia
- visual-field loss
- altered mental status
- dementia
- recent strokes
- myopathy

**Synonyms used by Isabel for the above query:**
- Hearing loss
- Short stature
- Hypertension
- Visual field loss
- Altered mental status

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:**

CVA (including lobar intracerebral hemorrhage, cerebral venous sinus thrombosis, and hypertensive encephalopathy)
Mitochondrial encephalomyopathy – MELAS
Status epilepticus
Vascular dementia

**Final Diagnoses of the case according to NEJM:**
MELAS syndrome

**Differential Diagnoses of the case as given by Isabel:**
MELAS syndrome (Mitochondrial encephalomyopathy) – Isabel 1st page
CVA / Stroke – Isabel 1st page
Vascular dementia – Isabel 1st page
Intracranial hemorrhage - Isabel 1st page
Status epilepticus - click on Nervous system disorders heading
Cerebral sinus venous thrombosis - click on Nervous system disorders heading

**Was the final diagnosis given by Isabel:**
Yes, Isabel 1st page

**Entire presentation cut and pasted into the Isabel query box:**
CVA / Stroke – Isabel 1st page
MELAS syndrome - click on Nervous system disorders heading
### Isabel differential:

<table>
<thead>
<tr>
<th>NERVOUS SYSTEM DISORDERS</th>
<th>INFECTIOUS DISEASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitochondrial Encephalomyopathies</td>
<td>Toxoplasmosis</td>
</tr>
<tr>
<td>CVA / Stroke</td>
<td>35%</td>
</tr>
<tr>
<td>Vascular Dementia</td>
<td>27%</td>
</tr>
<tr>
<td>Transient Ischemic Attack</td>
<td>23%</td>
</tr>
<tr>
<td>Intracranial Hemorrhage</td>
<td>22%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CARDIAC DISORDERS</th>
<th>ORTHOPEDIC DISORDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischemic Heart Disease</td>
<td>Renal Osteodystrophy</td>
</tr>
<tr>
<td>21%</td>
<td>23%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NEPHROLOGY</th>
<th>HEMATOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOXICCOLOGY</td>
<td>RHEUMATIC DISEASES</td>
</tr>
</tbody>
</table>

Isabel Healthcare Inc 8201 Greensboro Drive, Suite 601, Mclean, VA 22102 USA. Tel: 703-448-6488