

Case 37 (December 8 2005): [N Engl J Med 2005;353:2492-501](#)

Demographic: Male, 35 yrs, America North, General Speciality

Clinical features extracted from the case and entered into the query box:
cardiac arrest on sleeping

Synonyms used by Isabel for the above query:
none

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:

Noncardiac causes of ventricular fibrillation

- Respiratory
- Metabolic or toxic
- Neurologic

Cardiac causes of ventricular fibrillation

- Structural heart disease
- No structural heart disease (Brugada syndrome)

Final Diagnoses of the case according to NEJM:

Brugada syndrome

Differential Diagnoses of the case as given by Isabel:

Brugada syndrome – Isabel 1st page 68%

Was the final diagnosis given by Isabel:

Yes, Isabel 1st page

Entire presentation cut and pasted into the Isabel query box:

Sleep apnea – Isabel 1st page

Isabel differential for features extracted from entire case presentation:

<p>CARDIAC DISORDERS << Click here</p> <p>Brugada Syndrome / Idiopathic Ventricular Fibrillation RD</p> <p>Conduction Defects RD</p> <p>Long QT Syndrome RD</p> <p>Electromechanical Dissociation RD</p> <p>↳ Pericardial Effusion / Tamponade RD</p> <p>↳ Ventricular Tachyarrhythmias RD</p> <p>Sick Sinus Syndrome RD</p>	<p>RESPIRATORY SYSTEM DISORDERS << Click here</p> <p>COPD RD</p> <p>↳ Sleep Apnea RD</p>
<p>VASCULAR DISORDERS << Click here</p> <p>Aortic Aneurysm / Dissection RD</p>	<p>HEMATOLOGY << Click here</p> <p>↳ Drug Induced Thrombocytopenia RD</p>
<p>IMMUNOLOGIC SYSTEM << Click here</p> <p>↳ COVID RD</p>	<p>NUTRITIONAL DISORDERS << Click here</p> <p>Obesity-Hypoventilation Syndrome RD</p>
<p>RHEUMATIC DISEASES << Click here</p>	<p>NERVOUS SYSTEM DISORDERS << Click here</p> <p>Intracranial Hypertension RD</p> <p>↳ Syncope Disorders RD</p> <p>↳ Epilepsy & Seizure Disorders RD</p>
<p>TOXICOLOGY << Click here</p> <p>↳ Radioactive Isotopes RD</p>	<p>PSYCHOLOGIC DISORDERS << Click here</p> <p>Narcolepsy RD</p>
<p>ENVIRONMENTAL HEALTH HAZARDS << Click here</p>	<p>ENDOCRINE SYSTEM << Click here</p> <p>↳ Adrenal Neoplasms RD</p>
	<p>NEPHROLOGY << Click here</p> <p>↳ Renal Failure RD</p>
	<p>ORTHOPEDIC DISORDERS << Click here</p>
	<p>LIVER DISORDERS << Click here</p>
	<p>INFECTIOUS DISEASES << Click here</p>

Table 1. Causes of Ventricular Fibrillation–Induced Cardiac Arrest.

Noncardiac

Respiratory
Bronchospasm
Aspiration
Sleep apnea
Primary pulmonary hypertension
Pulmonary embolism
Metabolic or toxic
Electrolyte disturbances
Medications or drug ingestion
Environmental poisoning
Sepsis
Neurologic
Seizure
Cerebrovascular accident: intracranial hemorrhage or ischemic stroke

Cardiac

Structural heart disease

Myocardial ischemia or infarction due to coronary artery disease
Cardiomyopathy
Dilated
Hypertrophic
Arrhythmogenic right ventricular cardiomyopathy or dysplasia
Aortic stenosis
Aortic dissection
Pericardial tamponade
Congenital heart disease
Myocarditis
No structural heart disease
Catecholaminergic polymorphic ventricular tachycardia and right ventricular outflow tract tachycardia
Mechanical (commotio cordis) or electrical accidents
Preexcitation
Heart block
Drug-induced QT prolongation with torsades de pointes
Channelopathies
Long-QT syndrome
Short-QT syndrome
Brugada syndrome

Isabel differential for ventricular fibrillation:

CARDIAC DISORDERS << Click here	RESPIRATORY SYSTEM DISORDERS << Click here
<ul style="list-style-type: none"> ↳ Ischemic Heart Disease RD ↳ Ventricular Tachyarrhythmias RD <ul style="list-style-type: none"> Asystole RD ↳ Supraventricular Tachycardia RD <ul style="list-style-type: none"> Brugada Syndrome / Idiopathic Ventricular Fibrillation RD ↳ Pericardial Effusion / Tamponade RD <ul style="list-style-type: none"> Myocarditis RD Long QT Syndrome RD Mitral Valve Prolapse RD Electromechanical Dissociation RD Pulmonary Hypertension Disorder RD Aortic Stenosis RD Sudden Death Syndrome / SADS RD Cyanotic CHD: Decreased Pulmonary Flow RD 	<ul style="list-style-type: none"> ↳ Pulmonary Thromboembolism RD ↳ Aspiration Syndromes RD <ul style="list-style-type: none"> Sleep Apnea RD
TOXICOLOGY << Click here	SHOCK STATES << Click here
<ul style="list-style-type: none"> ↳ Occupational Toxins RD ↳ Industrial / Household Toxicity RD ↳ Environmental / Work Exposure RD ↳ Drug Overdose/Poisoning RD 	<ul style="list-style-type: none"> Cardiogenic Shock RD
	NERVOUS SYSTEM DISORDERS << Click here
	<ul style="list-style-type: none"> CVA / Stroke RD Epilepsy & Seizure Disorders RD
	VASCULAR DISORDERS << Click here
	<ul style="list-style-type: none"> ↳ Abdominal Aortic Aneurysm / Dissection RD
	NEUROMUSCULAR DISORDERS << Click here
	<ul style="list-style-type: none"> ↳ Muscular Dystrophies RD