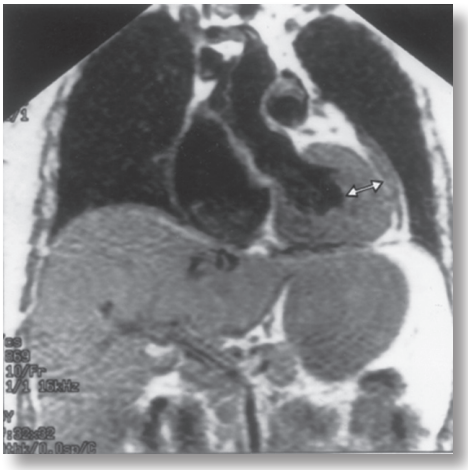
Would you recognize **FABRY DISEASE?**

Information for **Cardiologists**



Severe left ventricular hypertrophy in advanced stage of Fabry disease[1]

Cardiologists have the opportunity to identify patients with this progressive, often life-threatening genetic disease.

Cardiac manifestations of Fabry disease can include:

- Left ventricular hypertrophy
- Hypertrophic cardiomyopathy
- Arrhythmias
- Valvular disease, especially mitral insufficiency
- Impaired diastolic function
- Premature coronary artery disease
- Myocardial ischemia and angina pectoris
- Family history of cardiac disease

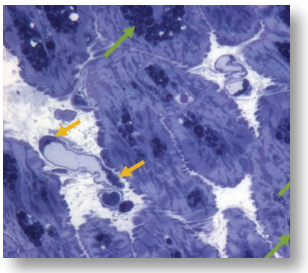
Other manifestations to look for:

- Progressive and/or unexplained kidney disease
- Premature stroke
- Gastrointestinal problems
- Impaired sweating
- Heat/cold and exercise intolerance
- Neuropathic pain
- Hearing loss
- Unexplained proteinuria

1. Cantor et al; Circulation 1998.

FABRY DISEASE PROFILE

Fabry disease is an inherited disorder that affects men, women, and children of all ethnicities. It is a multisystemic disorder that can result in irreversible, potentially life-threatening disease of the kidney, heart, and brain. The disease is characterized by the progressive cellular accumulation of a lipid substrate called globotriaosylceramide (or GL-3). Ongoing build-up of this substance is caused by deficiency of the lysosomal enzyme alpha galactosidase A (or a-GAL), which usually metabolizes GL-3 and keeps it from accumulating. Without enough of this essential enzyme, GL-3 accumulates in the lysosomes of most cell types over the course of a lifetime, often causing debilitating symptoms in childhood and adolescence and potentially irreversible tissue damage by adulthood.



GL-3 accumulation in cardiac vascular endothelial cells (yellow arrow) and cardiomyocytes (green arrow).

DISEASE RISK IN FAMILIES

- X-linked disorder
- Males with the disease pass the altered gene on to all of their daughters and none of their sons
- Females have a 50% chance, with each pregnancy, of passing the defective gene to their children
- Males with the defective gene are always affected
- Unlike many other X-linked disorders, females with the defective gene are affected to varying degrees due to random X inactivation (lyonization)
- If you identify a patient with Fabry disease, family testing should be considered

LEARN MORE

Visit **www.fabrycommunity.com** for more information on Fabry disease or call Sanofi Genzyme Medical Information at 800-745-4447, option 2.

DIAGNOSIS

- Patients should be referred to a geneticist for testing and further intervention.
- In males, definitive diagnosis can be made by assaying for deficient α-GAL enzyme activity in plasma, leukocytes, tears, biopsied tissue or dried blood.
- Females with Fabry disease may have enzyme activity in the normal to low-normal range. If a female is suspected to have Fabry disease, she should receive DNA analysis (either mutation analysis or linkage analysis, depending on whether the family mutation is known) to confirm diagnosis. Though an enzyme assay is not required for diagnosis, results can be helpful for understanding genotype-phenotype correlations.
- A number of laboratories across the United States and worldwide perform diagnostic testing for Fabry disease.

Cardiologists are in a unique position to identify patients and families at risk for Fabry disease

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