



CHECKLIST: FABRY DISEASE?

**FOCUS ON
CARDIOLOGY**

COULD IT BE FABRY DISEASE? Focus on Cardiology

Symptoms/Findings	Diagnostics		Patient's Medical History		Fabry Diagnosis	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Cardiomyopathy/left ventricular hypertrophy (LVH) (without/mild hypertension) <input type="checkbox"/> Prominent papillary muscle <input checked="" type="checkbox"/> Cardiac arrhythmia (paroxysmal or permanent atrial fibrillation, bradycardia, malignant arrhythmia/ventricular tachycardia) <input type="checkbox"/> Myocardial infarction <input type="checkbox"/> Congestive heart failure <input type="checkbox"/> Intramyocardial fibrosis <input type="checkbox"/> Valvular disorder (mitral valve, aortic valve) <input type="checkbox"/> Dyspnoea 	<ul style="list-style-type: none"> <input type="checkbox"/> ECG (changes with short P wave and short PR interval, increase in the QRS width and repolarisation disturbances) <input type="checkbox"/> Stress ECG <input type="checkbox"/> Spiroergometry <input type="checkbox"/> Holter ECG (24 hours) <input checked="" type="checkbox"/> Echocardiography: LVH (end diastolic wall thickness >12 mm), prominent papillary muscle, myocardial replacement fibrosis <input type="checkbox"/> Blood: hs-troponin, NT-proBNP 	<p>Fabry disease possible</p> <p>→</p>	<p>Any signs of kidney failure such as uraemia or hypocalcaemia?</p>	<p>Fabry disease probable</p> <p>→</p>	<p>Dry blood test determining:</p> <ul style="list-style-type: none"> • The genetic mutation • The level of α-galactosidase A (α-Gal A) activity • The biomarker lyso-Gb₃ <p>and/or</p> <p>Molecular genetic/cytogenetic Fabry diagnosis from:</p> <ul style="list-style-type: none"> • EDTA blood test • Serum • Buccal swab 	<p>Engagement of an expert centre for conclusive diagnosis. In the event of confirmed Fabry disease diagnosis, further monitoring of progress and organ screening is recommended.</p> <p>Note: this listing of symptoms/findings and diagnostic tests may not be all-inclusive.</p>
			<p>Family Medical History</p>			
			<p>Any signs of kidney failure such as uraemia or hypocalcaemia in relatives?</p> <p>Unexplained incidents of death in the family?</p>			



ECG, electrocardiogram; EDTA, ethylenediaminetetraacetic acid; hs, high sensitivity; lyso-Gb₃, globotriaosylsphingosine; NT-proBNP, N-terminal pro-brain natriuretic peptide.

SIGNS AND SYMPTOMS OF FABRY DISEASE ACROSS ORGAN SYSTEMS

Kidneys	Eyes	Skin	Nervous System	Differential Diagnosis
<ul style="list-style-type: none"> • (Micro-) albuminuria • Proteinuria (>300 mg/day) • GFR decrease (GFR <60 mL/min/1.73 m²) • Oedemas in the hands and feet → Note relationship between leg oedema and protein excretion • Parapelvic renal cysts • Progressive renal failure • Dialysis • Rare: renal tubular acidosis and nephrogenic diabetes insipidus 	<ul style="list-style-type: none"> • Cornea verticillata • Fabry cataract • Corneal opacity • Vascular anomalies of the conjunctiva • Vascular tortuosity of the retina • Optic neuropathy with visual field loss 	<ul style="list-style-type: none"> • Angiokeratomas • Dyshidrosis • Telangiectasias 	<ul style="list-style-type: none"> • TIA, stroke • Acroparaesthesia → Burning pain in hands and feet • Small fibre neuropathy • Pain crises • Dyshidrosis • Temperature intolerance • Gastrointestinal discomfort • Basilar ectasia/ectatic vessels (vertebrobasilar) • White matter lesions • Depression/fatigue • Headaches • Reduced lacrimation and salivation 	<ul style="list-style-type: none"> • Atherosclerosis • Hyperthyroidism • Mitochondriopathy • Long QT syndrome • Myocarditis • Systemic lupus erythematosus • Rheumatoid arthritis • Dermatomyositis • Endocarditis • Diabetes mellitus • Arterial hypertension • Sjögren's syndrome • Cardiac amyloidosis • Cardiomyopathy in Friedreich's ataxia • Obstructive sleep apnea
	Ears	Quality of Life		
	<ul style="list-style-type: none"> • Hearing loss (often high frequencies) • Tinnitus • Dizziness 	<ul style="list-style-type: none"> • Reduced physical capacity • Psychological problems • Fatigue • Pain 		

GFR, glomerular filtration rate; TIA, transient ischaemic attack.

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