CHECKLIST: FABRY DISEASE?

FOCUS ON PAIN MEDICINE

COULD IT BE FABRY DISEASE? Focus on Pain Medicine

Symptoms/Findings

- ☑ **Acroparaesthesia** → Burning pain in hands and feet
- ☑ **Small fibre neuropathy**
- ☐ **Pain crisis** triggered by exercise, stress, temperature change/fever
- ☐ **Temperature intolerance**
- ☐ **Dyshidrosis** (hypohidrosis, rarely hyperhidrosis)
- ☐ **Gastrointestinal discomfort**
- ☐ Fibromyalgia
- ☐ Cluster headache/ migraine
- ☐ Joint pain

Diagnostics

- ☐ Medical history/ physical examination
- ☐ Assessment of pain/ quality of life using scales such as the BPI, WHO-5, MDI-10, SF-36 health survey
- ☐ Electroneurography
- ☐ "Bedside" tests such as thermal, vibration, and touch tests; QST
- ☐ Skin biopsy if necessary
- ☐ Questioning on sweating levels, temperature intolerance
- ☐ MRI

Fabry disease possible →

Patient's Medical History

Any signs of kidney failure such as uraemia or hypocalcaemia?

Family Medical History

Any signs of kidney failure such as uraemia or hypocalcaemia in relatives?

Unexplained incidents of death in the family?

Fabry disease probable →

Fabry Diagnosis

Dry blood test determining:

- The genetic mutation
- The level of α-galactosidase A (α-Gal A) activity
- The biomarker lyso-Gb_3

and/or

Molecular genetic/ cytogenetic Fabry diagnosis from:

- EDTA blood test
- Serum
- Buccal swab

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.

Note: this listing of symptoms/ findings and diagnostic tests may not be all-inclusive.

BPI, Brief Pain Inventory; EDTA, ethylenediaminetetraacetic acid; lyso-Gb_3, globotriaosylsphingosine; MDI-10, 10-item Major Depression Inventory; MRI, magnetic resonance imaging; SF-36, Short-Form-36; QST, quantitative sensory testing; WHO-5, World Health Organization-5.

SIGNS AND SYMPTOMS OF FABRY DISEASE ACROSS ORGAN SYSTEMS

Kidneys

- **(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

Eyes

- **Cornea verticillata**
- **Fabry cataract**
- Corneal opacity
- Vascular anomalies of the conjunctiva
- Vascular tortuosity of the retina
- Optic neuropathy with visual field loss

Ears

- Hearing loss (often high frequencies)
- Tinnitus
- Dizziness

Heart

- **Cardiomyopathy/ left ventricular hypertrophy** (without/mild hypertension)
- Myocardial infarction
- Congestive heart failure
- Intramyocardial fibrosis
- Cardiac arrhythmia
- Valvular disorder (mitral valve, aortic valve)
- Dyspnoea

Skin

- **Angiokeratomas**
- **Dyshidrosis**
- Telangiectasias

Quality of Life

- **Reduced physical capacity**
- Psychological problems
- Fatigue
- Pain

Nervous System

- **TIA, stroke**
- Basilar ectasia/ ectatic vessels (vertebrobasilar)
- White matter lesions
- Depression/fatigue
- Reduced lacrimation and salivation

Differential Diagnosis

- Inflammatory rheumatic diseases
- Rheumatoid arthritis
- "Growing pains"
- Vasculitis
- Recurrent fever syndromes
- Porphyria
- Peripheral, focal, or multifocal neuropathy
- Peripheral, generalised neuropathy
- Uraemic neuropathy
- Central neuropathy
- “Mixed pain” syndromes
- Neuropathy due to diabetes mellitus or alcohol abuse
- Psychogenic pain

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

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