HEREDITARY ATTR AMYLOIDOSIS DIAGNOSE A PATIENT, CHANGE A LIFE

Hereditary ATTR amyloidosis is a progressive and fatal disease that can affect multiple organ systems and is characterized by sensorimotor and autonomic polyneuropathy (including gastrointestinal manifestations), cardiomyopathy, and carpal tunnel syndrome, as well as ocular, renal, and spinal involvement.[1-4]

SUSPECT HEREDITARY ATTR AMYLOIDOSIS IN PATIENTS WITH THESE RED-FLAG SIGNS AND SYMPTOMS[1]

POLYNEUROPATHY[1,4]	☐ Progressive, symmetric, length-dependent peripheral sensorimotor neuropathy*
+ 1 OR MORE OF THE FOLLOWING RED-FLAG SIGNS, SYMPTOMS, OR FAMILY HISTORY	
☐ **FAMILY HISTORY OF HEREDITARY ATTR AMYLOIDOSIS[1]**	
☐ **BILATERAL CARPAL TUNNEL SYNDROME[1,4-6]**	
AUTONOMIC NEUROPATHY[1,4]	☐ Orthostatic hypotension ☐ Urinary retention and incontinence associated with recurrent UTIs ☐ Erectile dysfunction ☐ Sweating abnormality
including GASTROINTESTINAL MANIFESTATIONS[1,4]	☐ Diarrhea ☐ Constipation ☐ Alternating diarrhea and constipation ☐ Unexplained weight loss
CARDIOVASCULAR MANIFESTATIONS[1,4,7-10]	☐ Congestive heart failure (peripheral edema, syncope) ☐ Ventricular wall thickening with preserved ejection fraction ☐ Heart rhythm disorders ☐ Conduction blocks
NEPHROPATHY[4]	☐ Protein in urine ☐ Mild azotemia ☐ Renal failure
OCULAR MANIFESTATIONS[4]	☐ Vitreous opacities ☐ Glaucoma ☐ Abnormal blood vessels in eye ☐ Pupillary abnormalities
OTHER[4,6,11]	☐ Lumbar spinal stenosis ☐ Spontaneous biceps tendon rupture ☐ Rapid disease progression ☐ Failure to respond to prior therapies for another diagnosis

ATTR, amyloid transthyretin; UTI, urinary tract infection

*In nonendemic areas, can present as idiopathic rapidly progressive sensorimotor axonal neuropathy or atypical chronic inflammatory demyelinating polyneuropathy[1]

EARLY DIAGNOSIS IS CRITICAL TO ENSURE OPTIMAL MANAGEMENT OF HEREDITARY ATTR AMYLOIDOSIS

CLINICAL SUSPICION OF AMYLOID NEUROPATHY

CONFIRMATION OF HEREDITARY ATTR AMYLOIDOSIS

DNA sequencing

- ☐ Analysis of the amyloidogenic *TTR* variant
- ☐ Can support or exclude a diagnosis of hereditary ATTR amyloidosis

Amyloid typing

- ☐ Immunohistochemistry or mass spectrometry

Biopsy of amyloid deposition

- ☐ Possible biopsy sites: labial salivary gland, subcutaneous fatty tissue of abdominal wall, skin, kidney, nerve, gastrointestinal tract including submucosa
- ☐ Congo red staining with characteristic green birefringence under polarized light

PATIENT FOLLOW-UP AFTER DIAGNOSIS

Clinical examination every 6 months (every 3 months for stages II/III*)

Neurology

- ☐ New or progressed symptoms
- ☐ Functional scores (eg, walking ability, polyneuropathy disability, neurologic impairment score)
- ☐ Autonomic (eg, bladder/urinary tract infection; orthostatic hypotension; erectile dysfunction; and gastrointestinal disturbances, including diarrhea and early satiety)

Cardiology

- ☐ Electrocardiography
- ☐ Echocardiography and NT-proBNP

Ophthalmology

Modified body mass index, weight

ATTR, amyloid transthyretin; NT-proBNP, N-terminal fragment of the probrain natriuretic peptide; TTR, transthyretin
*Stage II: Progression of motor signs in lower limbs with steppage and distal amyotrophies; muscles of the hands becoming wasted and weak; patient obviously disabled but can still move around with help; Stage III: Patient confined to a wheelchair or a bed, with generalized weakness and areflexia
Figure modified with permission from Adams D, et al.[1]

No-cost, confidential genetic testing and counseling is available through the hATTR Compass program to patients suspected of having or clinically diagnosed with hATTR amyloidosis with polyneuropathy.

Learn more at:
www.hATTRCompass.com

hATTR Compass™
Map Your Genetic Journey

REFERENCES

1. Adams D et al. *J Neurol*. 2020;12(9):e006075; **2.** Coelho T et al. *Curr Med Res Opin*. 2013;29(1):63-76; **3.** Ando Y et al. *Orphanet J Rare Dis*. 2013;8:31; **4.** Conceicao I et al. *J Peripher Nerv Syst*. 2016;21(1):5-9; **5.** Sperry BW et al. *J Am Coll Cardiol*. 2018;72(17):2040-2050; **6.** Donnelly JP et al. *J Hand Surg Am*. 2019;44(10):868-876; **7.** Castano A et al. *J Nucl Cardiol*. 2016;23(6):1355-1363; **8.** Ruberg FL, Berk JL. *Circulation*. 2012;126(10):1286-1300; **9.** Coelho T et al. A physician's guide to transthyretin amyloidosis. Amyloidosis Foundation, 2016; **10.** Gertz MA. *Am J Manag Care*. 2017;23(7 suppl):S107-112; **11.** Geller HI et al. *JAMA*. 2017;318(10): 962-963.

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