

Transthyretin Amyloid Cardiomyopathy (ATTR-CM) Frequently Asked Questions.



Q: What is transthyretin amyloidosis (ATTR)?

A: ATTR is a rare, progressive disease characterized by the abnormal buildup of amyloid deposits composed of misfolded transthyretin protein in the body's organs and tissues. ATTR can impact numerous organs and tissues in the body, including the peripheral nervous system, and organs such as the heart, kidneys, gastrointestinal tract and eyes.^{1,2,3}

Q: What is amyloid?

A: Amyloid refers to the abnormal fibrous deposits which are insoluble and composed of groups of misfolded proteins.⁴

Q: What is transthyretin amyloid cardiomyopathy (ATTR-CM)?

A: ATTR-CM is a rare, progressive, underdiagnosed, and severe form of ATTR that primarily affects the heart and is associated with heart failure.^{1,3}



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Q: What causes ATTR-CM?

A: ATTR-CM occurs when transthyretin, a transport protein that naturally circulates in the blood, becomes unstable, and dissociates into monomers, which misfold. The misfolded protein aggregates into amyloid fibrils which build up over time in the heart and causes the heart muscle to become stiff, eventually resulting in heart failure.^{1,3}

Q: What are the two sub-types of ATTR-CM?

A: The two sub-types of ATTR-CM include:

1. Hereditary, or variant ATTR-CM (hATTR) is inherited from a relative and is caused by a mutation in the gene that produces the transthyretin protein. It affects both men and women, with symptom onset occurring in people as early as their 50s or 60s.
2. Wild-type ATTR-CM (wtATTR) is associated with aging and is thought to be the most common form of ATTR-CM. This form most often affects men over the age of 60 and is not caused by a genetic mutation.^{1,3, 5-8}

Q: What are the signs and symptoms of ATTR-CM?

A: Patients with ATTR-CM may experience symptoms similar to those of more common causes of heart failure. These symptoms include shortness of breath, fatigue, swelling in the lower legs, and irregular heartbeat. Since amyloid can build up in other parts of the body, there are other signs and symptoms associated with ATTR-CM, including but not limited to diagnosed carpal tunnel syndrome, GI problems like diarrhea, constipation or nausea, or pain or numbness in the lower back or legs.^{1-3, 9-12}

Q: How is ATTR-CM diagnosed?

A: Once ATTR-CM is suspected, a doctor will rule out another form of cardiac amyloidosis, known as light chain amyloidosis (AL), by assessing blood and urine tests. This is an important step, as AL amyloidosis and ATTR-CM have a very different clinical course. After ruling out AL amyloidosis, a doctor may utilize non-invasive nuclear scintigraphy, a cardiac biopsy or both to confirm a diagnosis of ATTR-CM. Once ATTR-CM is diagnosed, genetic counseling and testing is recommended. Genetic testing can help confirm or rule out hATTR, which may have implications for not only the patient but their family members as well. Genetic tests typically use a blood or saliva sample.¹³⁻¹⁵

Q: How common is ATTR-CM?

A: Although this is a rare disease, its exact prevalence is unknown and it is significantly underdiagnosed.^{14,16,17}

Q: Why is the diagnosis rate of ATTR-CM low?

A: Diagnosing ATTR-CM is challenging, as disease awareness is low among physicians and patients often present with signs and symptoms similar to more common cardiac conditions (i.e. heart failure). Because of this, education is vital to increase awareness and understanding of ATTR-CM. This may potentially help to identify people with the disease earlier.^{1,15}

Q: Are treatment options available for ATTR-CM?

A: Yes. Until recently, there were no approved medicines for the treatment of ATTR-CM. Historically, treatment options for ATTR-CM were restricted to symptom management, and, in rare cases, heart (or heart and liver) transplant.³

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