

Ehlers Danlos Syndrome and Hypermobility: A Rheumatologist's Perspective

Stephen Soloway, MD, FACP, FACR, CCD and Alyxandra Morgan Soloway, MD

ABSTRACT

None

Copyright: © 2022 by the authors. Submitted for open access publication under the Journal of Individualized Medicine and Therapies, of the Society of Individualized Medicine and Therapies, Inc.

DIAGNOSIS AND THERAPY

While Ehlers Danlos Syndrome (EDS) remains the most common hypermobility disorder by name, it is preferred not to use the term without actual testing. The phenotypes of most hypermobility disorders are very similar. Typically, the patient is easily identifiable. It often takes no more than one minute to recognize, diagnose, and start explaining to the patient; rather than needing to ask any questions about them. As a rheumatologist who sees patients who come in with pain on a regular basis, our job is to figure out whether the pain is inflammatory or non-inflammatory. Patients with pain related to Hypermobility usually have non-inflammatory pain.

“Usually” is emphasized. For unexplained reasons, some hypermobile patients tend to have prolonged morning stiffness similar to rheumatoid arthritis. Occasionally, to compound the problem, a hypermobile person has concurrent Lupus, Rheumatoid Arthritis, Psoriatic Arthritis, or other spondyloarthropathy. This can hinder the diagnosis. However, when interviewing patients (the primary test to diagnosing hypermobility), a glance at the entire body, starting with the hair, eyes, ears, skin on the face, teeth, jaw, neck, and all joints, is usually enough to make possible a diagnosis

of not only Hypermobility but Dysautonomia. One common notation is that the patients either have thin, brittle hair that grows very slowly or thick, fast-growing, healthy hair. Similarly, finger and toenails are either very strong and grow fast or very fragile, break easily, and grow slowly. These are the minor criteria that are put together. Any two minor criteria with any major criteria will probably give you more than 96% specificity for Hypermobility disorders.

The Hypermobility spectrum is much wider, but stretching the spectrum will lead to far more rare diseases. The best criteria may be the nine simple tests of the Beighton scoring protocol. It is positive (> 7/9 for younger patients and > 5/0 for older patients) in virtually everybody and has in my opinion no specificity. I frequently discuss the following: If a patient has any of the three following major criteria, near-sightedness, easy bruising, unexplained early Osteoarthritis with the exclusion of Chondrocalcinosis or Hemochromatosis, the patient is likely to have a Hypermobility syndrome.

Other minor criteria include but are not limited to sprains, dislocations, hernias, Diverticulitis or Diverticulosis, Scoliosis, Spondylolisthesis, cleft lip, cleft palate, off-

JOINT

white coloration of the sclerae, Mitral Valve Prolapse, and increased frequency of fractures at a young age. For Dysautonomia, which can also be the prelude to Hypermobility, patients frequently have sweating, goosebumps, Anxiety, flushing, Mast Cell activation features, dry mouth, acid reflux, Paralytic Ileus, constipation due to colonic inertia, poor dentition due to acid reflux and acid build up in the mouth, or Hyperhidrosis.

The therapy for patients with Hypermobility and Dysautonomia, focusing on Hypermobility, includes splints with braces, wraps, and exercises. All patients are taught isometric exercises and are also sent to physical therapy to fine-tune their skills. Their most important skills are isometric exercises. Anything that breaks down muscle will regenerate and strengthen muscle. However, when moving a joint to strengthen the muscle, one is automatically overusing the joint. The joint does not know it is being overused, and this leads to early breakdown of the joint. However, with isometrics, one is merely holding a position until they can no longer hold it. This will achieve a very similar benefit, the breakdown of muscle which can then regenerate to become stronger and thicker muscle, without overusing the joint.

Future directions in the diagnosis and treatment will lead to earlier intervention as there is almost no awareness of these diseases. Many people are mislabeled with Fibromyalgia. In fact, two-thirds or more of the patients previously diagnosed in the last five years with a Fibromyalgia label do not have Fibromyalgia [personal observation]. Of the ones that do not have fibromyalgia, at least 75% to 80% have Dysautonomia as the source of their pain. In these cases, the

Dysautonomia is of the small fibers, causing patients to feel burning all over. The unknowing doctor merely labels them as Fibromyalgia without digging deeper. In the future, easier access to gene testing, easier access to Parasympathetic and Sympathetic (P&S) testing (Physio PS, Inc., Atlanta, GA), and most importantly, easier access to sudomotor testing (which can replace small fiber biopsy) will not only improve the differential diagnostic for Fibromyalgia, but it will improve the differential diagnostic for Hypermobility. If genes can be identified, immunomodulatory therapy may be the future, but the gross under-diagnosis of these conditions is so profound that the future has to start with the awareness of what is being missed.

For now, given that there is no cure for Hypermobility, a patient should be given hope that a better quality of life may be returned by P&S monitoring and follow-up to identify the patient's individual P&S dysfunction and to treat it. Treating it will help to restore balance within the P&S systems and thereby help to restore a better quality of life. However, this will take time. The patient's own system will fight the therapy due to the chronic disorder. This makes the therapy planning difficult but not impossible. There is always hope. Once the patient's therapy plan is determined to work, it will become a life-long effort with at least maintenance dosing to help maintain P&S balance, until or unless a cure for Hypermobility is discovered.

Hypermobility Dysautonomia Is NOT Fibromyalgia

As a Rheumatologist viewing Hypermobility and Dysautonomia or EDS, Osteogenesis Imperfecta, Marfan's, Pseudoxanthoma Galasticum, Stickler syndrome, and many

JOINT

others, they may be phenotypically recognized upon visual inspection. This is not necessarily the case in general. As a Rheumatologist, when patients walk in the office and say emphatically that they do have Fibromyalgia, they should be asked about their Fibromyalgia diagnosis. They typically report that they have pain all over. This is not the definition of Fibromyalgia. The definition of Fibromyalgia is trigger point pain in a specific distribution above and below the diaphragm bilaterally for more than six months. It may occasionally be associated with headaches, poor sleep, depression, etc. When asked to be more specific about where their pain is, patients often refer to their limbs, arms, legs, and body. In reality, what they are describing is the pain of Dysautonomia.

The pain of Dysautonomia (*aka.*, Small Fiber Disorder or Small Fiber Neuropathy) is the burning sensation from inflamed small fiber nerves that are in the skin that do not have names. Small Fiber Disorder is positively diagnosed by sudomotor testing or small fiber biopsy of the skin using a special kit by a qualified dermatologist. Small Fiber Disorder seems to be very prominent, probably in 20% of the population. Patients will be referred for a variety of testing. First and foremost, they will be referred for either sudomotor testing or skin biopsy looking for small fiber neuropathy. If Small Fiber Neuropathy is detected, Dysautonomia may or may not be confirmed. The small nerve fibers in the body include both pain nerve fibers and Sympathetic nerve fibers. In some patients, the Sympathetic nerves fibers are apparently not affected. As a word of caution, the standard Dysautonomia testing is not valid since it does not distinguish P&S activity,

only total autonomic activity, and forces assumption and approximation to theorize P&S dysfunction, which is very often based on poor or wrong assumptions. One must go to a qualified center to have the P&S differentiation sorted out. Please refer to the published article, Cyanosis with Dysautonomia mimics Raynaud's [1], where venous pooling mimics Raynaud's. While one disorder is a reversible spasm of blood vessels, the other is Parasympathetic Excess causing venous pooling.

While the symptoms are protean, and may seem to follow simple patterns that either go with Parasympathetic or Sympathetic symptomatology, they are usually not both. With experience, this is often an easy diagnosis to pick up. Start with observing and questioning the patient, who is typically a nervous young female with pain and burning all over, with pain that started when she was in her teens or even earlier. The most important aspects of Hypermobility Dysautonomia are: 1) make the correct diagnosis, 2) make sure that proper treatment is instituted for the actual cause of the problem, and 3) be sure that the treatment does not encourage disease.

It is uncertain if Fibromyalgia in a true form can actually exist but rather falls under pain amplification. This is in spite of the so-called placebo control points. In fact, pain in the volar forearm, thumbnail, and forehead may be tender. However, this is also expected in Dysautonomia.

Unfortunately, Dysautonomia, and more specifically P&S dysfunction, is poorly understood and therefore severely underdiagnosed, which leaves many Hypermobility patients in untenable situations. It is estimated that 25% of the population has a Hypermobility disorder to

JOINT

some degree, and I would estimate that 80% of those have concurrent Dysautonomia. It is the Dysautonomia rather than the Hypermobility leading to a patient feeling unwell; however, the Hypermobility will

lead to early Osteoarthritic joint pain even in the teenage years.

REFERENCES

1 Soloway AM, DePace NL, Colombo J, Soloway S . Cyanosis With Dysautonomia Mimics Raynaud Disease. J Clin Rheumatol. 2019 Aug 5. doi: 10.1097/RHU.0000000000001107. [Epub ahead of print]