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Case reports

Unraveling the Complexity: A Multisystemic Case of Ehlers-Danlos Syndrome with Recurrent Joint Dislocations and Pregnancy Complications

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Hypermobile Ehlers–Danlos syndrome (hEDS) is a clinically diagnosed connective tissue disorder that often eludes timely recognition, especially in underrepresented populations. We present the case of a 28-year-old African American woman with a decade-long history of multisystem symptoms, including recurrent joint dislocations, gastrointestinal dysmotility, and obstetric complications, who was ultimately diagnosed using the 2017 hEDS criteria. Her constellation of findings, including dual enteral access and four unexplained pregnancy losses, represents a severe and underreported phenotype of hEDS. Despite numerous specialist evaluations, her diagnosis was delayed approximately 12 years. We outlined her multidisciplinary management plan and discuss how anchoring bias and structural inequities contributed to diagnostic delay. This case emphasizes the need for clinicians to maintain a high index of suspicion and apply standardized diagnostic criteria, even in the absence of cutaneous signs. Early recognition and coordinated care can significantly improve outcomes in marginalized patients with complex presentations.

INTRODUCTION

Ehlers–Danlos syndromes encompass 13 heritable disorders of collagen and extracellular-matrix biology, with a global prevalence estimated between 1:5,000 and 1:100,000.[1,2] Hypermobile EDS (hEDS) lacks an identified pathogenic variant and therefore remains a clinical diagnosis using the 2017 International Classification.[3] Classic teaching emphasizes skin hyperextensibility and atrophic scarring; however, many patients, particularly those from under-represented populations, present without conspicuous cutaneous findings, increasing the risk of mis- or delayed diagnosis.[4-6]

We describe a young African American woman whose multisystem manifestations were individually labeled as fibromyalgia, irritable bowel syndrome, mast cell activation syndrome (MCAS), and recurrent pregnancy loss long before a unifying hEDS diagnosis was considered. This case illustrates diagnostic pitfalls, outlines evidence-based management, and explores the role of structural inequities in connective-tissue disorders.

CASE PRESENTATION

The patient presented to an outpatient clinic to establish primary care following years of fragmented subspecialty consultations. She first experienced shoulder and thumb dislocations at age 16. Over the next decade, she developed episodic syncope, severe myalgias, gastrointestinal dysmotility leading to placement of a gastrostomy (G) tube for venting and a jejunostomy (J) tube for enteral feeding, and four unexplained first-trimester miscarriages (G6P2-0042) complicated by pre-eclampsia. Despite consultations with orthopedics, gastroenterology, neurology, and obstetrics, no unifying disorder was identified.

At age 27 she encountered a gastroenterologist familiar with EDS who, together with a primary-care physician (see Appendix A), reviewed her history using the 2017 hEDS guidelines. The 2017 diagnostic criteria for hEDS include: 1. Generalized joint hypermobility (e.g., Beighton score ⩾5/9 in adults); 2. Two or more of the following: systemic manifestations of a connective tissue disorder, positive family history, and musculoskeletal complications; 3. Exclusion of alternative diagnoses.[3]

Physical examination revealed generalized joint hypermobility (Beighton 6/9), mild piezogenic papules, and soft, mildly hyperextensible skin without atrophic scarring. Vascular EDS gene panel and COL3A1 sequencing were negative.

2017 hEDS Criteria Met: • Criterion 1: Generalized joint hypermobility (Beighton 6/9) • Criterion 2: ⩾5 systemic manifestations (recurrent dislocations, GI dysmotility, pelvic-floor dysfunction, early-onset osteoarthritis, mast cell activation syndrome) • Criterion 3: All alternative heritable and autoimmune disorders excluded; normal vascular-EDS panel.

Multidisciplinary Management Plan

Domain	Intervention	Rationale
Cardiovascular	Baseline echocardiogram (normal) and annual follow-up	Screen for aortic-root dilation is common in hEDS
Musculoskeletal	Physical and occupational therapy focusing on proprioception, core stabilization, and joint-protection strategies; prescription of low-dose naltrexone 2 mg nightly for chronic pain	Reduce dislocation frequency and improve function
Gastrointestinal	Prucalopride 2 mg daily for colonic dysmotility; continued elemental formula (Vivo-nex) via J-tube; scheduled electrolyte monitoring every 2 weeks until stabilized	Manage severe dysmotility and prevent hospitalizations
Immunologic	H_1/H_2 blockade (cetirizine 10 mg BID, famotidine 20 mg BID), cromolyn 200 mg QID; referral to immunology for trial of omalizumab	Mast-cell activation control
Reproductive	Pre-conception counseling, low-dose aspirin, and early maternal-fetal-medicine referral in future pregnancies; discussion of adoption and surrogacy options	Mitigate obstetric risk
Psychosocial	Cognitive-behavioral therapy every 2 weeks; community resources for caregivers of children with autism	Address mental health burden

At 6-month follow-up, the patient reported a 40% reduction in dislocation frequency, stabilization of electrolytes, and improved quality of life.

DISCUSSION

This case expands the phenotype of hEDS by demonstrating that the absence of skin findings does not exclude the diagnosis and that profound visceral and reproductive involvement can dominate the clinical picture. Severe GI dysmotility requiring dual enteral access has been described in <2% of hEDS cohorts,[7] while aggregated obstetric morbidity (⩾3 miscarriages plus hypertensive disorders) is likewise sparsely reported.[8,9] These clinical features, when clustered in a single young patient, highlight an especially rare and severe form of hEDS-related burden that is underrepresented in the literature.

Clinicians encountering patients with multisystem symptoms, especially women of color without cutaneous stigmata, should maintain a high index of suspicion for hEDS and apply the 2017 criteria systematically. Proactive identification can prevent years of suffering, unnecessary interventions, and delayed therapeutic support.

In addition to her medical complexity, this patient served as a full-time caregiver to two children with special needs, exerting chronic physical strain that worsened her musculoskeletal instability. Despite interacting with over ten specialists, her diagnosis was delayed for more than a decade. Her case illustrates how fragmented care and diagnostic bias can delay recognition of systemic conditions, particularly in patients with complex presentations.

Diagnostic Bias and Health Equity: African American women experience a median diagnostic delay of 4–6 years longer than white counterparts for selected rheumatologic diseases.[10] Delays in this patient were compounded by attribution of multisystem symptoms to anxiety, fibromyalgia, and eating disorder history, reflecting anchoring bias and structural racism. Incorporating race-conscious, rather than race-based, medicine embraces the reality that social determinants (e.g., access, bias) rather than biology largely drive inequities.[11]

MANAGEMENT PEARLS

- Objective criteria: Apply the 2017 hEDS guidelines systematically and document Beighton scoring.
- Cardiovascular screening: Echocardiography is recommended at baseline and every 2–3 years in hEDS; more frequently if aortic diameter >40 mm.[2]
- Pregnancy planning: Low-dose aspirin and early referral to high-risk obstetrics reduce pre-eclampsia and uterine rupture risk.[10]
- Pain modulation: Low-dose naltrexone has emerging evidence for connective-tissue-related chronic pain and was well tolerated here.[12]

CONCLUSION

This case underscores the importance of maintaining a broad differential for young women with unexplained multisystem complaints. Even without cutaneous signs, hEDS should remain on the clinician's radar. A high index of suspicion, application of formal diagnostic criteria, and coordinated multidisciplinary care can prevent years of diagnostic delay and improve outcomes. Clinicians must remain vigilant to avoid anchoring bias and ensure equitable care for women of color presenting with complex, systemic symptoms. Systematically applying hEDS diagnostic criteria and recognizing atypical presentations, especially in marginalized populations, can dramatically alter clinical outcomes.

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SUPPLEMENTARY MATERIALS

Supplemental information: Tables and Appendix A

Download: https://academic-med-surg.scholasticahq.com/article/142359-unraveling-the-complexity-a-multisystemic-case-of-ehlers-danlos-syndrome-with-recurrent-joint-dislocations-and-pregnancy-complications/attachment/294807.docx