Recognising symptoms — Adult

PMCHS / SHMP terrain · Programmed Mast Cell Hyperreactivity Syndrome

pmchs.org · histamine-research.com

Who is affected?

PMCHS predominantly affects women (97.5% of the cohort). Transmission is mainly maternal (77–84%), consistent with a mitochondrial and epigenetic component. The average diagnostic odyssey exceeds 15 years.

Common triggers

· Histamine-releasing foods (tomato, citrus, chocolate, alcohol, fermented)
· Hormonal cycle — oestrogen peaks (days 12-14, 20-22)
· Acute or chronic emotional stress
· Heat, intense physical effort, sun exposure
· Strong smells, chemicals, perfumes
· Infections, inflammatory states
· Certain medications (NSAIDs, codeine, some antibiotics)
· Combined oral contraceptives (frequent aggravation reported)

Skin & mucous membranes

· Chronic or episodic urticaria, dermographism
· Flush (sudden redness of face, neck, chest)
· Generalised or localised itching without visible lesion
· Recurrent cherry angiomas (small red skin spots)
· Transient telangiectasias, especially on chest and neck
· Swelling (lips, eyelids, hands) — angioedema
· Extreme skin sensitivity to friction

Digestive system

· Recurrent abdominal pain, post-prandial cramps
· Significant bloating, abdominal distension
· Alternating diarrhoea / constipation
· Gastro-oesophageal reflux resistant to PPIs
· Episodic nausea, vomiting
· Multiple and fluctuating food intolerances

Nervous system & behaviour

· Brain fog — difficulty concentrating, memory issues
· Recurrent headaches / migraines
· Anxiety, disproportionate irritability
· Sensory hypersensitivity (noise, light, smells)
· Unexplained chronic fatigue, post-exertional malaise
· Sleep disorders, insomnia
· Episodes of mild confusion or dissociation

Cardiovascular & autonomic system

· Palpitations, episodic tachycardia
· Orthostatic hypotension, dizziness on standing
· Heat or cold intolerance
· Cold hands and feet, poor peripheral circulation
· Unexplained night sweats
· Dysautonomia (POTS associated in some profiles)

Respiratory system & ENT

· Chronic nasal congestion, rhinitis without identified IgE allergy
· Chronic dry or irritative cough
· Sensitivity to strong smells (perfumes, products)
· Episodic laryngeal oedema (sensation of tight throat)
· Recurrent sinusitis

Pain & musculoskeletal system

· Migratory joint pain (without structural lesion)
· Ligamentous hyperlaxity (hEDS profile frequently associated)
· Diffuse muscle pain, myalgias
· Neuropathic pain, paraesthesia
· Pressure sensitivity (tender points)

Hormones & metabolism

· Severe PMS — cyclical symptom worsening
· Thyroid dysregulation (hypothyroidism frequently associated)
· Cyclical sugar cravings (histamine → insulin mechanism)
· Diet-resistant weight gain (lipedema frequently associated)
· Reactions to hormonal contraceptives — aggravation under pill

Recognising symptoms — Adult

PMCHS / SHMP terrain · Programmed Mast Cell Hyperreactivity Syndrome

pmchs.org · histamine-research.com

The 4 PMCHS degranulation phenotypes

Frequent diagnostic failure is explained by the diversity of mediators involved. The clinical picture varies considerably depending on the dominant phenotype.

Histamine phenotype

- Flush, urticaria, itching, nasal congestion
- Headaches, brain fog, sugar cravings
- Responds to H1/H2 antihistamines

Tryptase phenotype

- Diffuse pain, neuropathy, profound fatigue
- Demyelination (mast cell–vagus nerve loop)
- Baseline tryptase sometimes elevated (HAT if >8 ng/mL)

Leukotriene phenotype

- Severe nasal congestion, asthma, nasal polyps
- Abdominal pain, tissue inflammation
- Responds to leukotriene antagonists (montelukast)

Prostaglandin phenotype

- Intense flush, profuse diarrhoea, early osteoporosis
- Bone pain, severe menstrual cramps
- Omega-3 and low-dose aspirin sometimes beneficial

■ **A single individual may present several phenotypes.** The fluctuating nature of symptoms and their multi-systemic diversity is the clinical signature of PMCHS.

Frequently associated comorbidities

These conditions are not separate diagnoses but expressions of the same hyperreactive mast cell terrain.

Lipedema

Painful fat accumulation, mainly in the lower limbs. Aggravated by oestrogens.

Hypermobile Ehlers-Danlos (hEDS)

Hyperlaxity, joint pain, instability. The MCAS–hEDS–POTS triad is well documented.

POTS / dysautonomia

Orthostatic tachycardia, intolerance to standing, dizziness.

Endometriosis

Severe cyclical pelvic pain. Mast cells are found in excess in endometriotic lesions.

Hidradenitis suppurativa (HS)

Recurrent nodules and abscesses in friction areas. Mast cell terrain demonstrated histologically.

Hashimoto's thyroiditis

Frequently associated autoimmune hypothyroidism. Mast cells participate in thyroid inflammation.

Neurodivergence (ADHD, ASD)

AuDHD profile frequent in the cohort. Mechanistic link via thalamic mast cells and microglia.

Fibromyalgia

Chronic diffuse pain, fatigue, sleep disorders — often an expression of the PMCHS terrain.

■■ **Important:** Normal baseline tryptase does not exclude PMCHS. Mediators are fluctuating and rarely measured in routine practice (95% of respondents have never had urinary histamine measured).