Mast Cell Activation Syndrome (MCAS): A Guide for Medical Practitioners

Overview

MCAS, first proposed in 2010, is an umbrella term describing inappropriate mast cell activation. As of 2022, it includes both primary and secondary mast cell disorders.

Diagnostic Criteria

All three must be met:

1. Episodic, objective signs/symptoms involving ≥2 organ systems: skin, respiratory, gastrointestinal, or cardiovascular.
2. Evidence of systemic mast cell-mediator release, temporally corresponding with symptoms.
    - Serum tryptase increase: (1.2 x baseline) + 2 ng/mL.
    - Alternative mediators: >100% increase above baseline and exceeding normal range.
3. Response to mast cell-targeted medications.

Practical Approach

- Formal criteria can be challenging to meet, especially capturing an elevated serum tryptase.
- Similarly, for many people the symptoms are either continual due to ongoing chronic allergen exposure, or not objectively apparent (e.g. upper GI involvement).
- Alternatively, consider an “MCAS-like” diagnosis based on symptoms and treatment response. Given the significant chance of the patient improving with safe, simple and cheap medications, where’s the harm in a temporary treatment trial?
- Common symptoms: food sensitivities, GI issues, rashes, flushing, itching, sinusitis/hay fever symptoms, Dysautonomia.
- Note: Headache, fatigue, cognitive issues overlap with POTS symptoms.

Treatment Trial

Initiate a combination therapy using one medication from each category:

1. H1 Blocker (non-sedating) — Choose one:
   Administer twice daily at twice the standard dosing

Medication	Dose
Fexofenadine	360mg BD
Cetirizine	20mg BD
Levocetirizine	10mg BD
Loratadine	20mg BD
Desloratadine	10mg BD

PLUS

2. H2 Blocker — Choose one:

Medication	Dose
Famotidine	40mg BD
Nizatidine	300mg BD

Trial the selected combination for 1–2 weeks.

Treatment Considerations

- If the initial combination is very effective, gradually taper doses to find the lowest effective dose/combination that adequately manages symptoms.
- If partially effective, consider rotating through options within each medication class to identify the most effective agent for the individual patient.
- If still inadequate symptom control, consider adding:
    - Ketotifen: Start at 0.5mg BD, titrate up to 2mg BD over weeks.
    - Montelukast: 10mg daily.
    - Cromolyn: standard dosing.
- If ineffective, discontinue and consider alternative diagnoses.

Follow-up

- Adjust dosages based on symptom control.
- Consider referral to an immunologist for complex cases or if the above treatments are insufficiently effective.

Remember: This approach is based on clinical experience. Always use professional judgment and consider individual patient factors when diagnosing and treating.