Practice Parameter: Algorithmic Management of Urticaria

Indian Academy of Pediatrics – Allergy and Applied Immunology Chapter

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Introduction

Urticaria is a common skin condition characterized by transient development of wheals (hives), angioedema, or both. It affects up to 20% of the population during their lifetime, with chronic urticaria (CU) affecting around 5%. Urticaria is classified into Acute Urticaria (AU) and Chronic Urticaria (CU) based on symptom duration, with acute forms resolving within 6 weeks and chronic forms persisting beyond 6 weeks. Proper diagnosis and management are essential to prevent complications and improve quality of life.

I. Clinical Diagnosis of Urticaria

A. Symptoms and Signs

Category	Clinical Features
Skin Rash	Erythematous, itchy, elevated wheals that disappear within 24 hours and may reappear elsewhere. No residual marks or scars.
Angioedema	Swelling of eyes, lips, hands, feet, genitalia, often painful.
Systemic Symptoms	Rare but may include fatigue, fever, or joint pain in chronic urticaria.

Red flags to rule out other conditions:
- Urticarial vasculitis
- Schnitzler syndrome

- Mast cell mediated angioedema
- Hereditary angioedema

II. Diagnostic Algorithm

1. Clinical Suspicion
- Acute onset of transient wheals and/or angioedema
- Associated history: Food intake, drug intake, insect bites, infections, stress

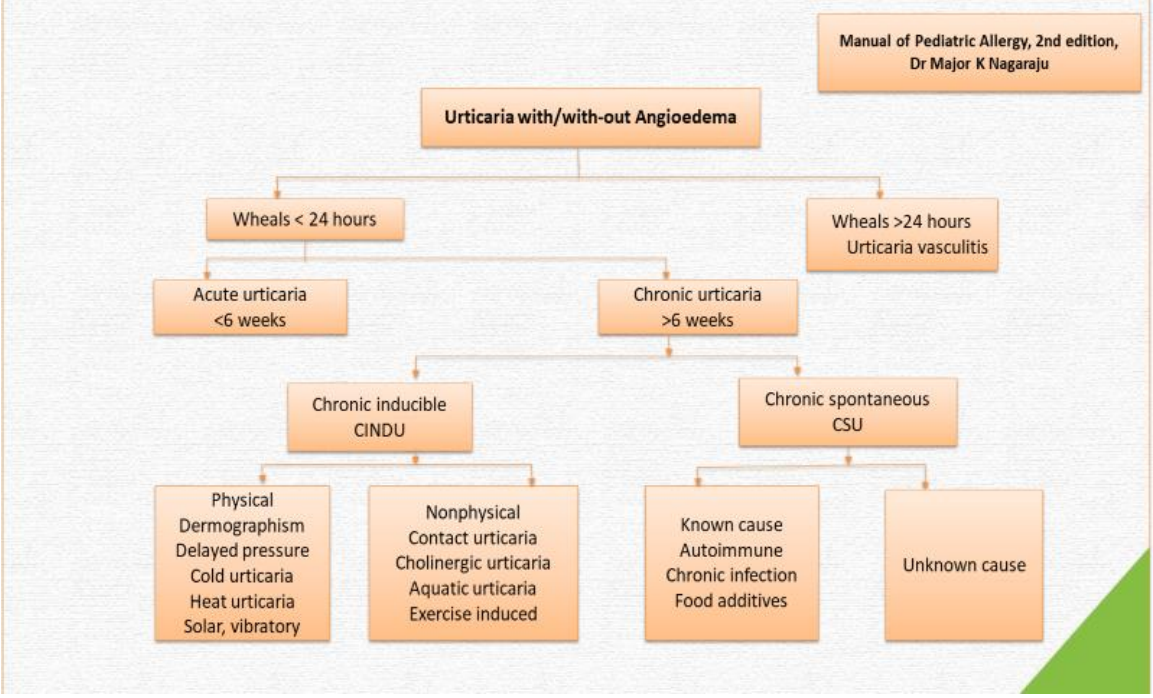
2. Rule Out Differentials
- Urticarial vasculitis (painful, persistent lesions)
- Infections
- Autoimmune disorders (e.g., Hashimoto's Thyroiditis)

3. Assessment Tools
- Urticaria Activity Score (UAS7)
- Urticaria Control Test (UCT)

4. Optional Investigations (Indicated by History)
- CBC with differential
- ESR, CRP
- TSH, Anti-TPO Antibodies

III. Classification of Urticaria Severity

Type	Definition
Acute Urticaria (AU)	Symptoms <6 weeks
Chronic Spontaneous Urticaria (CSU)	Symptoms ≥6 weeks without known trigger
Chronic Inducible Urticaria (CIU)	Triggered by physical stimuli (cold, pressure)

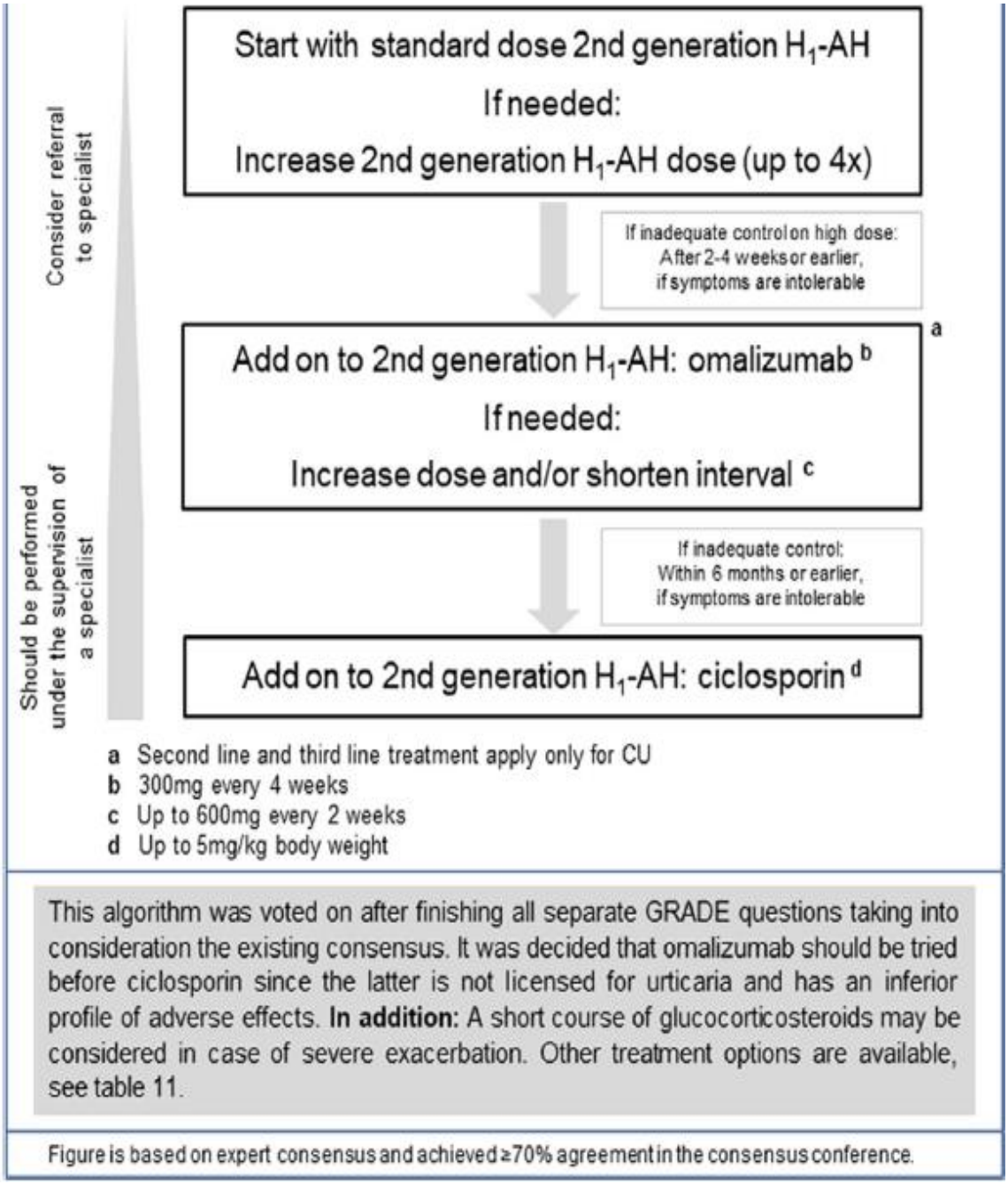


IV. Management Algorithm

Step 1: Non-Pharmacological Measures

- Patient education (CU not life-long, medications safe)
- Stress reduction (Yoga, Pranayama)
- Good sleep, healthy diet avoiding pseudo-allergens
- Weight reduction

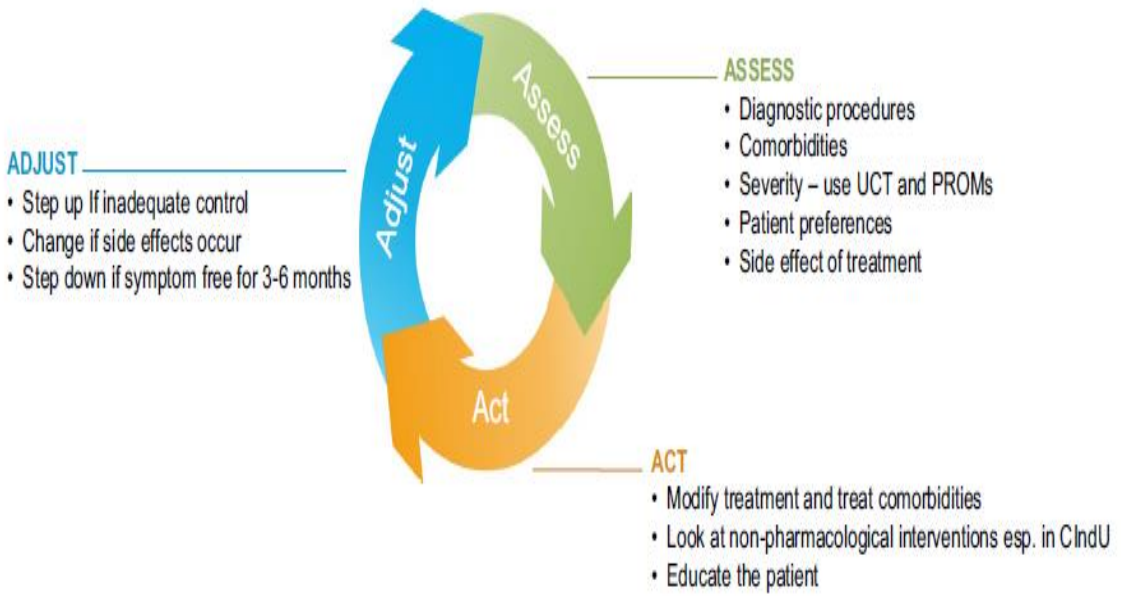
Step 2: Pharmacologic Therapy



Severity	First-line Therapy	Second-line / Third-line Therapy
Mild AU/CSU	2nd-generation antihistamines (e.g., cetirizine)	Increase dose (up to 4x), Omalizumab (specialist care)
Severe CU	Oral corticosteroids (short course)	Omalizumab → Ciclosporin (specialist care)

CHRONIC URTICARIA:

MANAGEMENT DECISIONS & TREATMENT ADJUSTMENTS [5]



UCT Score	UCT Score <12	UCT Score 12-15	UCT Score =16
Control Level	Uncontrolled	Well Controlled	Completely Controlled
Action	Step-up* if: On 1-4 fold 2gAH > 7-28d – On OMA > 3 MONTHS	Well-controlled * Continue therapy and try to optimize	Completely controlled Step Down: based on individual factors by reducing dose or extending intervals

Tips in Management

- Give time to the patient
- Involve patient in the treatment – Non pharmaceutical approach
- Patient Education –
    - CU – Not Life long
    - CU – Generally does not lead to any complications in future

- CU – Medications used a safe

- First follow up after 15 days
- Once achieved control step by step decrease medications and stop
- Inform patient to reinitiate antihistamine if next time symptoms recur

Step 3: Long-term Strategy

- Taper therapy gradually once controlled
- Educate on reinitiation of therapy if symptoms recur

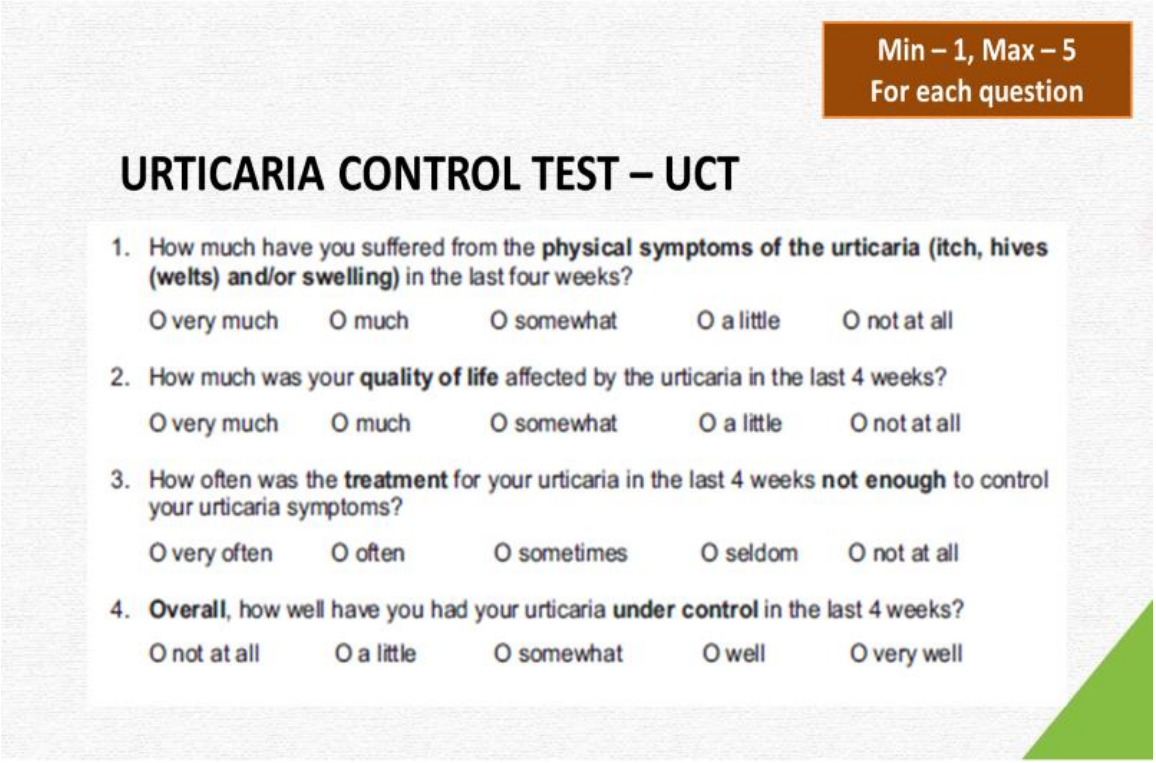
V. Follow-Up and Monitoring

Component	Recommendation
Symptom Assessment	Every 4–6 weeks using UAS7 and UCT
Medication Adjustment	Step down therapy after control is achieved for 3–6 months
Monitor Comorbidities	Thyroid disorders, stress, infections

Urticaria Activty Score

Score	Wheals	Pruritus
0	None	None
1	Mild (<20 wheals/24h)	Mild (present but not annoying or troublesome)
2	Moderate (20 – 50 wheals/24h)	Moderate (troublesome but does not interfere with normal daily activity or sleep)
3	Intense (>50 wheals/24 h or large confluent areas of wheals)	Intense (severe pruritis, which is sufficiently troublesome to interfere with normal daily activity or sleep)

UAS7, the sum of the score (0–3 for wheals +0–3 for pruritis) for each day is summarized over one week (7 days) – Min – 0 and maximum is 42



VI. Practical Tips

- Avoid pseudo-allergens
- Maintain a food/event diary to identify triggers
- Proper use of antihistamines
- Avoid long-term corticosteroids
- First follow-up after 15 days, then regular reviews

Conclusion

A structured algorithm combining detailed history, minimal investigations, patient education, and stepwise pharmacologic management offers an effective approach to managing urticaria in pediatric practice. Emphasis on culturally appropriate counseling and patient empowerment ensures better long-term outcomes.

Suggested Reading

1. Kayiran MA, Akdeniz N. Diagnosis and treatment of urticaria in primary care. North Clin Istanb. 2019 Feb 14;6(1):93-99. doi: 10.14744/nci.2018.75010. PMID: 31180381; PMCID: PMC6526977.

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4. Bernstein, J.A., Kavati, A., Tharp, M.D., Ortiz, B., MacDonald, K., Denhaerynck, K. & Abraham, I.L. (2018). Effectiveness of omalizumab in adolescent and adult patients with chronic idiopathic/spontaneous urticaria: a systemic review of 'real-world' evidence. *Expert Opinion on Biological Therapy*, 18(4), 425-448. https://doi.org/10.1080/14712598.2018.1438406