

(Recommendations Are Intended As General Guidelines And Should Be Adjusted For Individual Patients)

- ✓ **Initial visit:** Review of History, medications, previous therapy

Discontinue medications (e.g. antibiotics, NSAIDS, ACE inh) associated with illness if possible

Therapy

- 1) Non-Sedating and Sedating anti-histamines (H1 and H2)
 - 2) Trial of oral corticosteroids if not responding to antihistamines
 - 3) Skin testing or IgE serum to specific agents, contact allergy testing or physical urticaria testing (e.g. ice cube test) if suggested by history (patient must be off anti-histamines at least 48 hours for skin or physical urticaria testing)
 - 4) Laboratory testing if features suggesting system illness, vasculitis
 - a. Thyroid TSH and anti-thyroglobulin
 - b. CBC, serum protein electrophoresis
 - c. Liver and kidney function, hepatitis C IgG
 - d. H. pylori IgG, IgM, other infectious illness if suggested by history
 - e. ANA and anti-DNA anti-bodies if history or exam suggestive of vasculitis
 - f. C1 inh protein level and function, complement c2, c4 if angioedema present
 - g. Chromagranin A or urine catecholamines if significant flushing, carcinoid features
 - h. Serum Tryptase if significant component of anaphylaxis with urticaria, angioedema
 - i. Chest x-ray and pulmonary testing if associated respiratory symptoms such as cough, wheezing
 - j. Serum immunoglobulins IgE, A, M, G, B and T cell FACS subsets if history suggestive of parasite infection, chronic infection
 - k. Pregnancy testing if relevant age and sex
 - l. Serum basophil activation or histamine release in vitro and/or autologous skin testing (not required but may be useful to confirm diagnosis)
- ✓ **Followup visits** at approximately 2 week interval until remission of symptoms or stable clinical improvement documented
 - 1) Review response to previous therapy, laboratory testing, allergies, physical or other triggers if present
 - 2) Alternate day oral corticosteroids 5-20 mg if partial response to therapy
 - 3) Discuss alternative therapies, risks and benefits
 - a. Cyclosporin A low dose (2mg/kg/day divided twice a day) with peak level and repeated kidney function if required for more than 2 weeks (only alternative therapy confirmed in double blind placebo controlled studies, not FDA approved).
 - b. Gastroenterology evaluation for H. Pylori infection if present
 - c. Antibiotic therapy of other bacterial, fungal, parasite infections if present
 - d. Leukotriene antagonists, not confirmed effective in meta analysis but may be useful in selected cases
 - e. Thyroid hormone and monitoring of TSH, endocrine evaluation if thyroid autoimmune disease present
 - f. Rheumatology evaluation, skin biopsy if ANA positive and/or suggestive of vasculitis, other autoimmune syndrome
 - g. Hematology evaluation if mastocytosis or other malignancy present
 - h. Multiple new therapy options for hereditary or acquired angioedema due to lack of c1 inh protein/ function
 - i. Other alternative therapies not confirmed in double blind placebo studies or not currently FDA approved
 - i. Colchicine, dapsone, NSAID desensitization, other anti-inflammatory or anti-viral agents (e.g. Valtrex if history of HSV)
 - ii. Therapy of Hepatitis C (interferon FDA approved for hepatitis but not associated urticaria)
 - iii. Omalizumab if patient has asthma or can obtain by other sources such as self pay (effectiveness confirmed in preliminary open label studies but not FDA approved for urticaria, angioedema)
 - iv. Other monoclonal antibodies (eg anti TNF alpha, Rituximab B cell depletion not FDA approved and unknown safety profile)
- ✓ **Followup visits** at 3 month intervals when stable on medication or yearly if in remission off therapy