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## ACUTE AND CHRONIC URTICARIA (Hives) and ANGIOEDEMA (Soft Tissue Swelling)

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**What are hives?** Urticaria (or hives) are itchy, red, raised bumps on the skin which resemble mosquito bites. They can be of varying sizes ranging from very small 1 – 2 mm in diameter to large plaques the size of saucers. Typically, the individual hives last for less than a day and often no more than 2 – 4 hours. Often, hives are worse at nighttime when cortisol levels drop.

The hives may be accompanied by swelling in the deeper tissues (a condition known as angioedema). The swelling often affects areas with loose connective tissue such as the eyelids, lips, tongue, throat, hands, genitals and feet.

**Acute vs chronic hives:** If the hives last for only a few hours or days, they are classified as *acute*. Hives which persist for more than six weeks are classified as *chronic*.

**Acute Urticaria:** Acute hives, lasting hours or days may be caused by allergic reactions to: foods, medications, immunizations, insect stings, parasites and, in children, viral infections.

**Medications** which most commonly cause hives are aspirin (ASA), anti-inflammatory drugs such as ibuprofen (Advil, Motrin), naprosyn, and related non-steroidal anti-inflammatory drugs. Pain killers such as morphine and codeine and antibiotics including penicillin are frequently the cause of hives, with or without soft tissue swelling.

A group of conditions, known as *physical urticaria*, may cause hives that recur with exposure to cold, heat, exercise, strong emotion (stress, embarrassment, anxiety) or pressure. Hives caused by physical urticaria often wax and wane, may last for years, and may run in families. One particularly common form of physical urticaria is dermatographism, a condition where scratching itchy skin causes the formation of intensely itchy linear welts.

**Chronic Urticaria:** Hives that persist for six weeks or more are generally caused by different conditions than those which last only for a few hours or days. For chronic urticaria (ie hives lasting weeks, months or even years), we test for underlying conditions which include vitamin B<sub>12</sub> deficiency, autoimmune thyroid disease, parasitic infestations, hepatitis, lupus, arthritis, lymphoma and other conditions.

**Evaluation of Hives:** The most important part of the initial evaluation is the history associated with the onset of the hives and the characteristics of the hives themselves. Often patients do not accurately recall the exposures which triggered the hives. In these cases, it is helpful to have the patient keep a diary recording recurrences of hives in relation to foods eaten, exposures to drugs and vaccines, dental work, travel history, environmental factors and activities.

Skin testing for allergies will indicate the extent to which an individual is predisposed to developing allergies to foods and environmental factors. While positive skin tests to foods do not necessarily imply clinically significant food allergies, these may provide a clue to causative factors in some cases.

Blood tests are generally reserved for hives that persist for six weeks or more in order to rule out serious underlying conditions such as those listed above.

***Autoimmune Urticaria:*** The most common cause of chronic hives is the presence of autoantibody directed against a protein in the skin, known as the FcεR1 high affinity IgE receptor. This receptor is localized on mast cells in the skin. When autoantibody binds to this receptor, the mast cell releases histamine, causing the formation of hives. This is not a serious condition but more of a nuisance. Unfortunately, we do not have access to this blood test in Ontario, but it is a diagnosis made by excluding other underlying conditions.

***Prognosis:*** Chronic hives tends to wax and wane. People generally experience exacerbations in chronic urticaria which may last days or weeks before going into remission.

Individuals who have hives only will tend to go into remission sooner than those who have hives and swelling (angioedema). In persons with urticaria alone, 50% will go into remission within 12 months. In those who have both hives and swelling, only 25% will go into remission within 12 months.

***Things to Avoid:*** In 30 – 50% of people with chronic hives, some drugs and foods may cause flares (exacerbations) of chronic hives or trigger swelling of the eyes, lips, tongue, throat, etc. and should therefore be avoided. These drugs and foods include aspirin, anti-inflammatory drugs such as ibuprofen and Naprosyn, painkillers such as codeine, alcohol and strawberries.

***Treatment:*** Blood tests are done to evaluate the potential presence of underlying conditions. If any underlying conditions are identified, treatment is directed towards those conditions.

If it is clear that acute or recurrent hives are caused by certain exposures, eliminating exposure to the causative agent will be very important.

Medications are generally used to control outbreaks of hives. Non-sedating (non-drowsy) antihistamines reduce itching very significantly although they do not always reduce the number of hives. Often no other treatment is given. If hives continue to prove troublesome in spite of antihistamines, additional drugs are added. As stronger drugs are added, side effects of these stronger medications may be experienced. Additional medications which are used may include cimetidine or ranitidine, ketotifen, doxepin, montelukast and hydroxychloroquine. Use of long-term therapy with steroidal drugs such as prednisone is generally avoided because of side effects.

Medicines applied to the skin, such as lotions, creams and sprays, will not help alleviate the hives. Cooling of the skin often relieves severe itching whereas heat makes itching worse. Therefore avoid overheating and hot baths.

Some medications such as antihistamines may cause drowsiness. Do not drive or drink alcohol or use other sedatives when taking these medications.