

Telephone Lines

Educational Information for Telephone Triage Nurses

Volume 5 Number 1

April 2008

Editor—Andrew Hertz, M.D., Rainbow Babies and Children's Hospital, Cleveland, Ohio
Co-Editor—Randy, Sterkel, M.D., St. Louis Children's Hospital, St. Louis, Missouri

Hives—What's the Big Bump All About

At some time during childhood a large proportion of children develop urticaria (hives), either localized or diffuse. Urticaria can be intensely itchy for the child and worrisome to the parents. The challenge for the telephone triage nurse is to distinguish over the phone, without the advantage of visualization, if a child's rash is truly urticaria, is it potentially a more serious rash, and does the child need to be seen for confirmation or further evaluation.

Urticaria are skin eruptions usually caused by the release of histamine leading to swelling and redness of the involved area. The histamine release can be stimulated by immune and non-immune mediated mechanisms. Urticaria are considered either Acute, if the duration is less than 6 weeks, or Chronic. The leading cause of both acute and chronic urticaria is usually unknown, however Table 1 lists the commonly identifiable causes of acute urticaria.

Is it Urticaria – See the Rash Over the Phone

Urticaria are typically well demarcated (identifiable discreet borders), usually circular (but may be irregularly shaped) papules with central clearing surrounded by erythema. The histamine causes a classic wheal (swelling) and flare (erythema) reaction that is pruritic. See Figures 1-2 for examples of hives. To consider a skin rash urticaria the lesions should have all of these qualities:

1. Well demarcated (circumscribed) papules (always raised) of same or various sizes
2. Pruritic
3. Areas of erythema with possible central areas of pallor
4. Appearance changes over a period of hours – does not stay constant
5. Areas of erythema blanch with pressure

If all 5 of these criteria are met, the likely diagnosis is urticaria (use the term "hives" for the parents). However, determining the 4th and 5th criteria are difficult over the phone. Assessment questions should be similar to the following:

- Are the lesions raised or flat?
- Are they red?
- Are there areas of central clearing or lack of redness?
- Do the lesions appear to change, move, or disappear over time?
- If you push down on a red area, does it become pale and then rapidly red again?

Inside This Issue

Hives

Rash Guideline Selection

Doctor On-Call

You Make the Call



Section on Telephone Care

The SOTC is part of the American Academy of Pediatrics. The SOTC is dedicated to promoting the delivery of quality telephone care.

For More Information

To learn more about the SOTC contact Julie Ake, AAP Section Manager at Jake@aap.org or 800-433-9016, ext. 7662.

Hives (Cont)

Note that although urticaria usually begin as discreet papules, they can coalesce (appear to grow together) obscuring borders as time passes. Urticaria resolve without leaving any discernable marks in the skin.

Urticaria can be accompanied by angioedema, which is subcutaneous swelling in certain areas. The edema is below the upper layers of the skin and does not have the erythematous appearance of hives.

Table 1 Common Causes of Acute Urticaria in Children

Unknown
Viral Infections
Medications
Hymenoptera stings including fire ants
Foods
Exposure to certain stimuli like cold, vibrations, pressure, sunlight

Managing the Hives

Once the triage nurse has confirmed the diagnosis of urticaria, triage is relatively simple. Use the triage guideline for urticaria or hives, confirm the child has no systemic signs of an allergic reaction (difficulty breathing or swallowing) and has no involvement of mucous membranes (sores in the mouth, eyes, vagina) or joints (swollen or stiff). Children with any of those symptoms **must be seen urgently**.

All other children with hives can be managed initially on the telephone. Home care consists of washing the involved area to eliminate any irritating substance. For children with extensive hives a bath can be given. Symptomatic relief of the itching can be managed with topical cool or cold compresses or ice, topical hydrocortisone cream (OTC), and oral antihistamines.



Figure 1 Urticaria—note central clearing



Figure 2 Urticaria—note how some coalesce

Hives (Cont)

Diphenhydramine is first line therapy of children with intense itching, however this will cause drowsiness in approximately 60% of children, and in a few children the paradoxical reaction of hyperactivity. Diphenhydramine is dosed every six to eight hours. Long acting and non-sedating antihistamines are now available over the counter and include loratadine (Claritin, etc.) and cetirizine (Zyrtec, etc) that can be given once a day for children over 2 years of age. Diphenhydramine can be used simultaneously with loratadine or cetirizine if the pruritus is not completely responsive. Localized application of cool compresses or brief periods of ice may offer assistance with pruritus.

When to be Seen

Although acute hives may last anywhere from hours to many weeks, children with hives of more than a few days duration may want to be seen by a physician. Although no etiology will be found for most children, an office visit may uncover an underlying cause and serve to reassure the patient and parent.

Is it Always Hives?

Many lay people use the term hives or welts as a generic term for a raised rash. Other rashes that may be called "hives" without truly being urticaria are listed in Table 2. The flow chart on Page 4 can be used to help a triage nurse determine which of the many rash guidelines to utilize if it is unclear from a caller's complaint.

Table 2 Rashes Often Confused with Urticaria

Cause of Rash	Distinguishing Characteristics
Contact Dermatitis	Does not change with time, no central pallor, indiscreet borders
Eczema	Does not change with time, no central pallor, possible scaling, indiscreet borders
Insect bites (often confused for hives)	Often create a hive, or wheal and flare reaction, at each bite. May get larger with time, often see a central indentation where the bite or sting occurred
Pityriasis rosea	Oval shaped often, no central clearing, does not change with time, usually not on distal extremities (past elbow or knee)
Drug associated eruptions – allergic and non-allergic	On medications, no central clearing, does not change over time

REFERENCES

Baxi, S. and Dinakar, C. Urticaria and Angioedema. *Immunology and Allergy Clinics of North America*. 2005; 25: 353-367

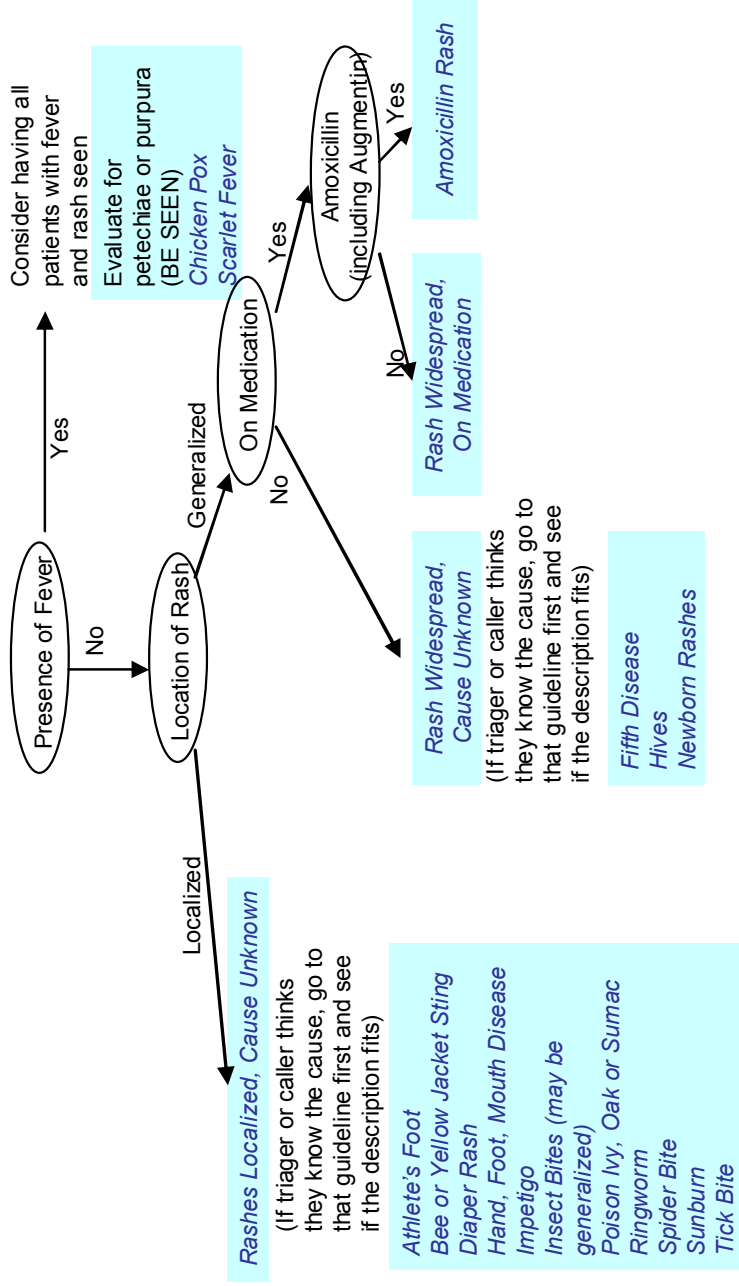
Amar, S. and Dreskin, S. Urticaria. *Primary Care: Clinics in Office Practice*. 2008; 35: 141-157

Schmitt B D., Hives, Pediatric Telephone Triage Algorithms -After-Hours Version, 2007.

This article was reviewed by Barton Schmitt, MD, The Children's Hospital, Denver, Colorado.

Rash Guideline Selection

For use with Pediatric Telephone Protocols*



*Schmitt, B.D., Pediatric Telephone Protocols, AAP, 2006

Doctor On-Call



What are the current recommendations for using medications like Tamiflu for influenza?

Flu season, especially in a particularly widespread epidemic like this year's, can be a discouraging time to be in pediatrics. A great number of our patients feel worse than they will for the remainder of the year, yet we cannot cure them. Our desire to have something to help our many patients with flu, combined with increasing public awareness of antiviral medications, have driven demand for medications like Tamiflu. However, these medications are not appropriate for all patients with confirmed, much less suspected, influenza.

In April 2007, the AAP Section on Infectious Diseases published recommendations for treatment of influenza (*Pediatrics*, 119(4), 852-60). The CDC regularly monitors and updates its recommendations on www.cdc.gov. The current recommendations are as follows. Tamiflu (1yo and older) and Relenza (7yo and older) are recommended for treatment of certain pediatric patients with influenza. One treatment group is "high risk" patients, such as those with chronic illnesses (eg. asthma, CF, cardiac disease and others). Also included in the high-risk group are all children between 12-24 months old. The second treatment group, as recommended by the AAP, includes "any otherwise healthy child with moderate-to-severe influenza infection who may benefit from the decrease in duration of clinical symptoms documented to occur with therapy".

The second treatment group described above raises questions. What constitutes "moderate-to-severe" influenza? What child wouldn't benefit, at least a little, from a reduction in duration of symptoms? So whom do we treat?

A few points are important to remember about these medications. Tamiflu and Relenza are only effective in reducing the duration of influenza if started within the first 48 hours of symptoms. Data suggests that the earlier they are started, the more effective they are. These medications offer no benefit to any other viral illness. Some patients experience GI upset with these medications. There are reports from Japan of neuropsychiatric complications in patients taking these medications. It is not clear whether or not these events are related to the medication, to the illness itself, or neither. The FDA and CDC continue surveillance for these complications in the US, but there has been no change in treatment recommendations as a result of these reports.

Many studies have shown that the accuracy of diagnosing influenza by history and physical exam alone is limited by overlap in symptoms with many other viral illnesses. Accuracy of diagnosing flu by telephone is likely even less. It seems prudent, therefore, to recommend that patients be diagnosed with influenza at least by physical exam, if not by a diagnostic study, prior to initiation of treatment. Exceptions may be considered for some high-risk patients with suspected influenza if rapid access to evaluation is unavailable.

The relative ambiguity in the current recommendations regarding whom to treat for influenza is a likely cause for variation in practice in EDs, clinics and offices around the country. This variation will remain until further data is generated to further clarify treatment recommendations.

From a telephone triage standpoint, we may see a shift over time in our advice for patients with suspected influenza from supportive treatment advice to earlier evaluation for some patients. Treatment by telephone, at least for now, should be generally avoided.



Is honey effective for cough in pediatric patients?

The FDA issued a public health advisory in January recommending against the use of all cough and cold medications in children under 2yo. Serious side-effects, including deaths, have been rarely linked to medications such as pseudoephedrine and dextromethorphan, both in the under 2 and over 2-year-old age groups. The FDA's nonprescription advisory panel is continuing an extensive review of the safety of these medications for children 2-11 years old, with recommendations forthcoming.

Doctor On-Call (continued)

Many physicians, due to either concerns about safety or doubts about efficacy, already recommended against these medications prior to the FDA's advisory. However, parents would usually like to help their sick children if possible. So doctors and parents continue to look for safe and ideally effective treatments for cough and other cold symptoms.

A December 2007 study (*Arch Pediatr Adolesc Med* 161(12) 1149-53) compared honey, dextromethorphan (DM) and placebo for treatment of cough in 2-18 year old patients. This study found honey to be significantly better than placebo in decreasing cough, while DM was no better than placebo. More study is needed to confirm that honey is effective, and if so at what dose and which type of honey. It is likely that honey is not hugely effective, but this study suggests that it may be an alternative for cough that is not only safe, but may actually work.

There is one cautionary note regarding honey that must be mentioned. Infants under 12-months-old should avoid honey due to rare cases of infant botulism from spores contained within the honey.



Please email any questions you would like to have Dr. Sterkel answer and have appear in *Doctor On-Call* to Jake@aap.org.

You Make the Call!

Please circulate this section to all the triage nurses in your office or call center. Nurses can answer the questions, go to http://www.surveymonkey.com/s.aspx?sm=kFT1M0orYv95mi8aMyQitw_3d_3d or click on [this link](#) and enter their answers.

Answers will be tallied and reported in the next addition along with the correct answers and explanations.

1. Urticaria always represent an allergic reaction to some allergen.

- True
- False

2. All of the following are signs or symptoms of normal urticaria EXCEPT

- Pruritus
- Edema
- Erythema
- Purpura
- Blanching
- Central clearing or pallor

3. Which of the following does not cause urticaria?

- Viruses
- Autoimmune diseases
- Cold temperatures
- Hymenoptera stings
- Foods
- Drugs
- All of the above cause urticaria

4. When making the diagnosis of urticaria on the phone, which of the following signs or symptoms may be absent but the likely diagnosis is still urticaria?

- Pruritus
- Discreet papules
- Erythema
- Edema

5. When treating urticaria patients should not be given both diphenhydramine and cetirizine.

- True
- False

6. Urticaria that last more than 48 hours are unusual.

- True
- False

7. All of the following may be confused by a telephone triage nurse as hives, EXCEPT

- Chicken Pox
- Insect bites
- Pityriasis rosea
- Drug eruptions

You Make the Call!

8. A distinguishing characteristic of urticaria over insect bites, is that urticaria lesions seem to migrate over the body, and insect bites stay in the same location.

- True
- False

9. Which of the following patients with influenza might be a candidate for treatment with Tamiflu?

- A 6-month-old child with new onset of symptoms
- A 4-year-old child with mild symptoms for one day
- A 6-year-old child with moderate symptoms for three days
- A 9-year-old child with asthma and new onset of symptoms

10. Which of the following treatments for cough/cold may be used in a nine-month-old infant?

- Dextromethorphan
- Pseudoephedrine
- Honey
- None of the above

11. The articles in this issue of *Telephone Lines* were clear and to the point.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

12. The content in this issue of *Telephone Lines* was interesting to me.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

13. The information in this issue of *Telephone Lines* will be useful to my practice.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

14. The content in this issue of *Telephone Lines* added to my knowledge of the topic.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

15. I have suggestions for future topics, questions for Doctor On-Call, or feedback. Enter response on-line.

You Make the Call!

Answers to You Make the Call! On Febrile Seizures

The correct answer in each question is bolded. A brief discussion of the correct answer follows selected questions.

1. Which of the following statements regarding febrile seizures is TRUE?

Febrile seizures can lead to lower IQ and performance in school.

Febrile seizures can cause cerebral palsy.

Febrile seizures are extremely scary for parents.

Children can die from febrile seizures.

Febrile seizures are usually the first sign of a seizure disorder.

2. A child who has their first febrile seizure at age 30 months is very likely (75%) to have another one before the age of 5.

True

False

3. A family history of febrile seizures is a risk factor for having a febrile seizure.

True

False

4. Which of the following statements about febrile seizures is FALSE.

All children who suffer a febrile seizure should be seen by a healthcare provider.

All children who suffer a febrile seizure will have another febrile seizure within 2 years.

Caregivers of any child who suffers febrile seizure should be instructed in proper care in the event of a recurrence.

A simple febrile seizure can only occur once a day.

5. Anticonvulsants are often given to children to prevent recurrence of febrile seizures.

True

False

6. All children who have had a complex febrile seizure should be seen by a neurologist.

True

False

7. All of the following methods will help reduce the risk of future febrile seizures EXCEPT

The use of anticonvulsants on a daily basis

The use of rectal valium at the first sign of a seizure

The use of antipyretics at the first sign of an illness

Keeping the child at home instead of daycare.

The use of rectal valium helps to treat a seizure, not to prevent a seizure.

8. If a child is actively seizing, a caregiver should always perform a finger sweep to clear any potential foreign body from the mouth.

True

False

You Make the Call!

9. Febrile seizures occur because high fevers (over 105) cause the brain of young children to randomly discharge electrical activity.

True

False

Remember, febrile seizures are more common at higher temperatures, but can occur at any level of fever.

10. Which of the following statements is (are) TRUE

Febrile seizures do not cause serious harm

Febrile seizures are usually NOT the first sign of a seizure disorder

Febrile seizures do not lead to brain damage

Febrile seizures are very scary for parents

All of the above

Exciting News for Nurses Coming Soon

You Make the Call and Nurse CEU

As you may know, the Section on Telephone Care has been working on obtaining CEU for those nurses who complete the You Make the Call quiz on-line. Our last efforts were not successful. However, we are hot on the trail of a new process for obtaining CEU which we hope to have in place by the next edition. We may even be able to obtain permission for past *Telephone Lines* issues. Keep your fingers crossed and stay tuned for more information.

Nurses to be Able to Join Section on Telephone Care

The Section on Telephone Care will be accepting as affiliate members Registered Nurses beginning in July of 2008. Details will be forthcoming to all physician members and also in the next edition of *Telephone Lines*. We are very excited to be finally able to formally collaborate with telephone triage nurses as we strive to push forth the mission of the Section on Telephone Care.