Angioedema

Angioedema (AE) is a sudden swelling of the eyelids, lips, lobes of ears, external genitalia, skin and other parts of the body. AE can happen by itself. It usually begins during the night and is found on awakening. It can happen along with hives and other allergic reactions. Attacks can be mild and annoying or life threatening (if there is swelling in the air passages). Angioedema generally occurs in a short time period (over minutes to hours) and gets better in 24 to 48 hours. It usually does not cause any serious problems.

There are two different kinds of AE:
Allergic - usually has hives.
Non Allergic - which includes:

- Overreaction or direct stimulation of cells that are a part of the immune system (*mast cells*). Usually has hives.
- Problems due to release of chemicals made by the body that cause swelling and inflammation (*kinins*). Usually no hives. This includes:
  - *Hereditary* (inherited from parents) AE.
  - *Acquired* (does not run in the family) AE. This has two types:
    1. One that shows up before or along with certain diseases.
    2. Due to the body's immune system attacking parts of the body's own cells (*autoimmune*).

CAUSES

Allergic

- AE due to allergic reactions are caused by a *trigger* (something that causes the body to react). Common triggers include:
  - Foods.
  - Medicines.
  - Latex.
  - Direct contact with certain fruits, vegetables and animal saliva.
  - Insect stings.

Non Allergic

- Mast cell stimulation may be caused by:
  - Medicines.
  - Dyes used in x-rays.
  - Autoimmune disease (where the body's own immune system reacts to parts of the body).
  - Possibly some virus infections.
- AE due to problems with kinins can be due to:
  - Hereditary (inherited from parents) or acquired (not inherited, but developed by itself). Attacks are triggered by:
    - -Mild injury.
    - -Dental work or any surgery.
    - -Stress.
    - -Sudden changes in temperature.
    - -Exercise.
    - -Medicines.
  - Certain medicines – especially blood pressure medicines for example angiotensin-converting enzyme (ACE) inhibitors such as Lisinopril. African-American persons are at nearly five times greater risk to develop AE than Caucasians from ACE inhibitors.

SYMPTOMS

Allergic:

- Non-itchy swelling of the skin. Often the swelling is on the face and lips but any area of the skin can swell. Sometimes the swelling can be painful. If hives are present, there is intense itching.

Non Allergic:

- If internal organs are involved (common in AE due to problems with kinins) there may be:
  - Feeling sick to one's stomach (*nausea*).
  - Belly pain.
  - Vomiting.
  - Difficulty swallowing.
  - Difficulty passing urine.
  - Breathing problems (if the air passages swell – can happen in allergic AE also).

Depending on the cause of AE, episodes may:

- Only happen once (if triggers are removed or avoided).
- Come back in unpredictable patterns.
- Repeat for several years and then gradually fade away.

DIAGNOSIS

Rapid onset of (it starts in minutes to hours):

- Swelling of lips.
- Swelling of eyelids.
- Swelling of tongue.
- Flushing (turning red)
- Feeling faint

Angioedema is diagnosed by physical exam. Testing may be done to figure out the causes:

- Allergy skin tests may be done to see if the problem is allergic.
- Blood tests to diagnose hereditary and some acquired types of AE. Family history can help diagnose hereditary AE.
- Other tests may be done to see if there is a hidden disease leading to the AE

TREATMENT

Treatment depends on the type and cause (if any) of the AE.

Allergic

- Allergic types of AE are treated with:
  - Immediate removal of the trigger or medicine (if any).
  - Epinephrine injection.
  - Steroids.
  - Antihistamines.
  - Hospitalization for severe attacks.

Non Allergic

- Mast cell stimulation types of AE are treated with:
  - Immediate removal of the trigger or medicine (if any).
  - Epinephrine injection.
  - Steroids.
  - Antihistamines.
  - Hospitalization for severe attacks.

- Hereditary AE is treated with:
  - Medicines to prevent and treat attacks.
  - Preventive medicines before dental work or surgery.

- Removing or avoiding medicines that trigger attacks.
- Hospitalization for severe attacks.
- There is little response to antihistamines, epinephrine or steroids.

- Acquired AE is treated with:
  - Treating underlying disease (if any)
  - Medicines to prevent and treat attacks

HOME CARE INSTRUCTIONS

- Always carry your emergency allergy treatment medicines with you.
- Wear a medical bracelet.
- Avoid known triggers.

SEEK MEDICAL CARE IF:

- You get repeat attacks.
- Attacks are more frequent or more severe despite preventive measures.
- If you have hereditary AE and are considering having children. It is important to discuss the risks of passing this on to your children.

SEEK IMMEDIATE MEDICAL CARE IF:

- You have difficulty breathing.
- You have difficulty swallowing.
- Fainting.

This condition should be treated immediately. It can be a threat to life if it involves the throat and causes swelling and makes it difficult to breathe.

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