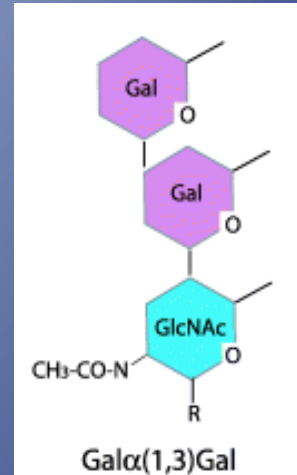


Statewide EMS Response
to
Alpha-gal Allergy
November 20, 2015
James Bledsoe, MD, FACS

What is alpha-gal?

- Carbohydrate synthesized by the glycosylation enzyme alpha-1,3-galactosyltransferase
- Alpha-gal epitope is present on the tissues and cells of all lower mammals
- Humans and apes, however, do not have alpha-gal due to an inactive gene product





Tripathi A. et al. J Allergy Clin Immunol Pract 2014;2:259-65
Data are from the Centers for Disease Control and Prevention Web site (http://www.cdc.gov/ticks/geographic_distribution.html#lone-star)

**Patients with delayed anaphylaxis to red meat
whose serum contained IgE antibodies to alpha-gal**



Alpha-gal Task Force

Created by Act 1247 to
make recommendations
for
early diagnosis and treatment
for alpha-gal allergy

The law's lead sponsor
Representative Julie Mayberry
has this allergy

The disease is caused by a reaction to Galactose-alpha-1,3 galactose.

The body is overloaded with immunoglobulin E. It is a response to eating mammalian meat after a lone star tick bite has induced both total serum IgE and serum specific IgE to alpha-gal.

All immunocompetent humans will have IgG antibodies to alpha-gal, but only a subgroup of patients have IgE antibodies to alpha-gal.

*Symptoms include hives,
angioedema, GI upset,
whole body itching and sometimes
anaphylaxis.*

EMS is involved to help
provide early life saving
intervention by administering
epinephrine.

Act 1108 expands public access to auto-injectable epinephrine to include an authorized entity that prescribes epinephrine.

This includes a:
parent
camp counselor
scout leader
school nurse, teacher or
other school employee
forest ranger or tour guide

We now have a legal opinion
from ADH.

First responders are included.

Firemen and Police Officers.

EMS needs to make certain of
the availability of epinephrine
and early recognition of
anaphylaxis.

Expand authorization as to
who administers epinephrine.

Long Term Treatment
of
Patients with Alpha-gal Allergy

If a patient is tolerating mammalian dairy products these items do not have to be stopped.

Patients with IgE antibodies and a clinical history of this disease need to have an epinephrine auto injector.

These patients should
meticulously avoid all
mammalian meat products.

It has been observed that tick avoidance will lead to waning of the IgE antibodies to alpha-gal over time.

However, reintroduction to mammalian meats should only be performed under the supervision of an experienced clinician.

This information will be distributed to all EMS medical directors so that they will educate the EMTs, paramedics and first responders.

Alpha-gal Allergy is

Delayed reaction to consumption
of mammalian meat in patients
with IgE antibodies specific for
galactose –alpha-1,3-galactose

Patients have a history of tick bite and a recent ingestion of red meat. They frequently have eaten 3-6 hours before symptoms occur.

Symptoms include hives,
angioedema, GI upset, whole
body itching and sometimes
anaphylaxis.

Early recognition is paramount and could be life saving. This condition could be overlooked in the absence of an insect bite, no prior history of allergy or thinking that the patient is having a hysterical reaction.

Responders must have a high degree of suspicion.

Treatment is administration
of epinephrine promptly.

Any person that is suspected to have an Alpha-gal allergy needs to be transported to an ED as soon as possible.

These patients will need more than an injection of epinephrine.

For non medical personnel who administer epinephrine under the provisions of Act 1108 must also activate the EMS system as soon as possible and report the use of auto-injectable epinephrine to the medical provider responding to the emergency.