The pages that follow contain information critical to protecting the health of your patients and the citizens of Colorado.

HAN ADVISORY

Number of pages including cover: 3

Subject: Advisory - Using Human Rabies Immunoglobulin (HRIG) for Rabies Exposures

Message ID: 9/12/2018 4:00:00 PM
Recipients: HAN Community Members.
From: TRI-COUNTY HEALTH DEPARTMENT
Adams, Arapahoe and Douglas County, Colorado

Recipient Instructions: For your information. No response required.

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September 12, 2018

Using Human Rabies Immunoglobulin (HRIG) for Rabies Exposures:

• Post Exposure Prophylaxis Prescribing Errors
• New HRIG Product Requiring Dosing Adjustment

Health care providers: Please distribute widely in your office

Key points

● Tri-County Health Department has identified numerous instances of errors in prescribing rabies post exposure prophylaxis (PEP) and, in particular, situations when human rabies immune globulin (HRIG) was not given to a potentially exposed patient. HRIG should never be excluded from any rabies PEP regimen. Improper administration of rabies PEP can result in inadequate protection against rabies infection.

● Grifols pharmaceutical company released a new human rabies immune globulin product called HyperRab 300. The concentration of HyperRab 300 is 300 IU/mL as opposed to all other available HRIG products which are concentrated at 150 IU/mL. Check which HRIG product is being administered to ensure the correct dose is given.

Errors in prescribing rabies post exposure prophylaxis (PEP)

Tri-County Health Department (TCHD) and local animal control agencies investigate hundreds of potential human rabies exposures each year. The ongoing skunk epidemic in Colorado and the Denver metropolitan area has elevated concern about human risk of rabies exposure. Prompt intervention is needed when someone has a high risk exposure to wildlife (especially rabies reservoir species such as skunks, bats, raccoons, foxes) or to an ill pet suspected of being infected with rabies.

Any suspected rabies exposure is required to be reported to public health within 24 hours. This includes bites or scratches from rabies reservoir species, wild carnivores, dogs and cats. You can report by phone, 303-220-9200 (after hours 303-461-2342), or fax using the Animal Bite Reporting Form available on the Colorado Department of Public Health and Environment website here: www.colorado.gov/pacific/cdphe/report-a-disease. TCHD will assist with evaluating the exposure, arranging for rabies testing when indicated, and making decisions on initiating PEP for residents of Adams, Arapahoe and Douglas Counties. For patients in other counties you can contact the Colorado Department of Public Health and Environment (CDPHE) by phone at 303-692-2700.

Over the past several weeks, TCHD has identified incidents when a provider initiated PEP without consulting with public health and did not provide human rabies immune globulin (HRIG) as part of the medication regimen. There were also incidents of HRIG dosing errors. The CDC’s Advisory Committee on Immunization Practices (ACIP) recommends always using both HRIG and rabies vaccine for PEP. HRIG is administered once to provide an immediate supply of rabies virus neutralizing antibody that binds virus that might have been introduced into the person’s body. Using HRIG bridges the gap until a person develops innate antibody in response to rabies vaccination.
**Recommendations**

- **HRIG should never be excluded from any rabies PEP regimen** (unless the patient has had a history of receiving rabies vaccine previously). Improper administration of rabies PEP can result in inadequate protection against rabies infection.

- **Do not use rabies vaccine alone as a form of PEP in situations when the exposure is felt to be low risk.** Providers who are unsure about whether rabies PEP is indicated for an animal exposure should consult with public health. If a decision is made to initiate PEP, the providers should use both HRIG and rabies vaccine.

- **HRIG should be given on Day 0 of PEP,** at the time of the first dose of rabies vaccine is given; however, HRIG can also be given up to and including Day 7 of the PEP series.

**New high-dose HRIG product is now available**

Historically there have only been two HRIG products licensed for use in the U.S. — Imogam by Sanofi and HyperRab S/D by Grifols. In 2017, KedRab by Kedrion Biopharma was added. All three HRIG products are concentrated at 150 IU/mL. A new HRIG product was introduced this summer from Grifols called HyperRab 300, which is twice as concentrated (300 IU/mL); therefore, a smaller volume can be used to achieve the same dosage of neutralizing antibody. Several hospital pharmacies in the Denver metropolitan area are now stocking the high dose Grifols product.

The recommended dose of HRIG is based on weight and calculated as 20 IU/kg body weight (9 IU/lb body weight) for persons of any age. HRIG must be given at exactly the correct dose to be effective. Both under- and over-dosing HRIG can be harmful to the patient. The Table below outlines the HRIG products available and dosing calculations.

**Table: Human Rabies Immunoglobulin Biologics Currently Licensed by FDA in the U.S.**

<table>
<thead>
<tr>
<th>Product</th>
<th>Manufacturer</th>
<th>Product Concentration</th>
<th>Vails Sold As</th>
<th>Dosage</th>
<th>Administration Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>HyperRab 300</td>
<td>Grifols (Talecris)</td>
<td>300 IU/mL</td>
<td>1 mL, 5 mL</td>
<td>20 IU/kg</td>
<td>0.0665 mL/kg</td>
</tr>
<tr>
<td>HyperRab S/D (discontinued)</td>
<td>Grifols (Talecris)</td>
<td>150 IU/mL</td>
<td>2 mL, 10 mL</td>
<td>20 IU/kg</td>
<td>0.133 mL/kg</td>
</tr>
<tr>
<td>KedRab</td>
<td>Kedrion Biopharma</td>
<td>150 IU/mL</td>
<td>2 mL, 10 mL</td>
<td>20 IU/kg</td>
<td>0.133 mL/kg</td>
</tr>
<tr>
<td>Imogam</td>
<td>Sanofi</td>
<td>150 IU/mL</td>
<td>2 mL, 10 mL</td>
<td>20 IU/kg</td>
<td>0.133 mL/kg</td>
</tr>
</tbody>
</table>

**Recommendations**

- Confirm with your pharmacist which HRIG product(s) is stocked at your facility.
- Ensure dosing is correct based on HRIG concentration.
- Update any protocols at your facility regarding use of HRIG.

For more information please visit: [www.tchd.org/396/Animal-Bites-Rabies](http://www.tchd.org/396/Animal-Bites-Rabies)

TCHD Disease Reporting Line: 303-220-9200 or 303-461-2342 (after hours)