Georgia Society of Health-System Pharmacists

Our Mission is to help our members become better practitioners.

October 2016 Newsletter

NOTICE OF RENEWALS OF PHARMACIST AND NUCLEAR PHARMACIST LICENSES AND NOTICE REGARDING ACTIVE - RENEWAL PENDING STATUS

The Georgia Board of Pharmacy has begun the online renewal process for active pharmacist and nuclear pharmacist licenses. Licensees interested in license renewal should consult the Board's website at https://gadch.mylicense.com/eGov/. All pharmacist and nuclear pharmacist licenses expire on December31,2016.

If a licensee has submitted a timely and complete renewal application on or before December31,2016, the licensee's license status online will change from "active"to"active-renewal pending"after submission of the renewal application."Active-Renewal Pending"does not mean that the license has lapsed, is inactive, is deficient,or invalid in anyway. Rather, "Active-Renewal Pending" status merely reflects that the licensee has submitted a timely renewal application. A licensee should save the receipt generated after submission of a timely and complete application as additional proof of renewal during the period in which the application is reviewed.

Please be reminded that licensees will not receive pocket license cards in the mail. Pocket license cards may now be printed, free of charge,on the Georgia Board of Pharmacy website: http://gadch.mylicense.com/ PocketCards/ . Pocket license cards may be also ordered using the"Duplicate Pharmacy License-License Verification Order Form" that appears under "Applications and Forms" on the website of the Georgia Board of Pharmacy :http://gbp.georgia.gov/

GEORGIA PHARMACISTS ON THE HILL

Patricia Knowles, Ken Jozefczyk and Pamela Stamm visit with Senator David Perdue (second from the left) and discuss Pharmacist Provider Status during ASHP Policy Week.

GSHP Board - Strategic Planning

The GSHP Board and Committee Chairs met on Thursday, October 20 to conduct its annual strategic planning session. The Board reviewed current activities of GSHP and plans for the next few years. Look for more

information to follow in a future newsletter.

GSHP Fall Meeting

Over 125 pharmacists, pharmacy technicians and students gathered October 21-23 at Brasstown Valley Resort for the GSHP Fall Meeting. It was a wonderful weekend of great CE, networking and beautiful Fall scenery.


Criteria
- More Efficacious
- More Cost Effective

ASHP Call for Recommendations for Appointments

Recommendations for appointments to ASHP committees are currently being accepted for the June
2017 - May 2018 term. The deadline for recommendations is November 14, 2016.

ASHP President-elect Paul W. Bush, with the approval of the Board of Directors, appoints members of ASHP Committees. ASHP members are encouraged to recommend themselves or other members for appointment.

In making recommendations for appointments, the President-elect takes into consideration geographic distribution, personal qualifications, and previous experience in ASHP and affiliated state societies. ASHP is especially interested in having recommendations that help ensure sufficient diversity in appointments. ASHP is also interested in identifying new practitioners, residents, and students who are well equipped to serve ASHP through an appointment to one of these bodies.

Members may recommend more than one individual for any particular body. The number of recommendations usually far exceeds the number of appointments. Members who have previously been appointed and who would like to continue serving must also submit recommendation materials.

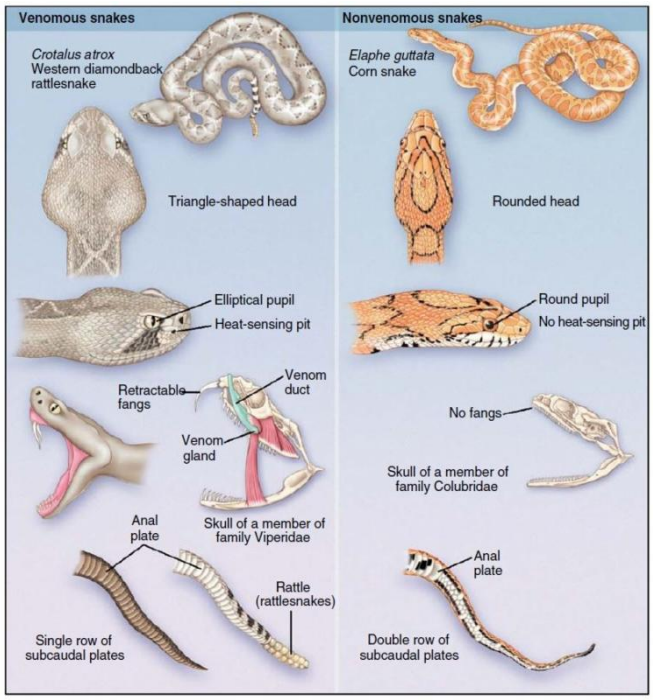
To recommend someone for appointment, an ASHP member must complete the online Appointment Recommendation Submission Form. The form allows members to provide comments on the candidate's (1) qualifications, (2) experience, (3) areas of special expertise, (4) previous involvement with ASHP or state affiliates, and (5) any special characteristics that will help ASHP achieve a balance of perspectives and diversity. Note that the candidate's curriculum vitae must be attached to the form when it is submitted.

If you have any questions, please contact the ASHP Executive Office at ashpeo@ashp.org .

Clinical Article

CroFab® for Pit Viper Envenomation
Taryn Murray, PharmD, BCPS

More than 45,000 snakebites occur each year with about 1/5 of them being from venomous snakes. Around 5 people die in the US each year due to a snake bite. The southeastern part of the country including North Carolina, Arkansas, Texas, Georgia, West Virginia, Mississippi, Louisiana, and Oklahoma have the highest bite rates. Snake bites occur most commonly during the warm months, from April to September with a peak incidence in July and August.



There are several key features to differentiate venomous snakes from nonvenomous snakes. Several distinctions include the different shape of the snakes head. Venomous snakes have a triangular-shaped head. The shape of the snakes eyes also differentiate venomous and nonvenomous with venomous snakes having elliptical pupils. Two other distinctions include the presence of a heat-sensing pit between the eye and nose, giving the pit viper their name,

and a single versus double row of subcaudal plates.

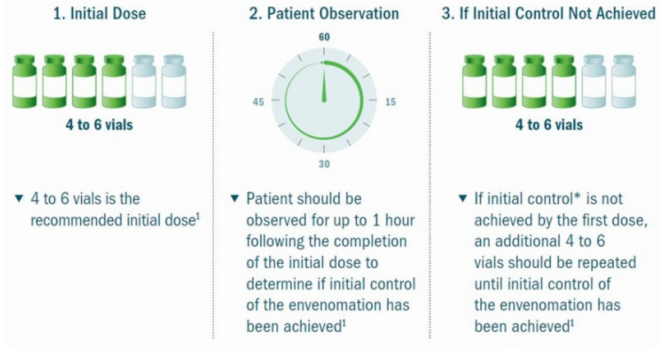
Crotalidae Polyvalent Immune Fab (Ovine) (CroFab®) is an antivenom therapy indicated for the management of patients with North American crotalid envenomation. This includes rattlesnakes, copperheads and cottonmouth snakes. Administration is recommended within 6 hours of the snakebite to prevent clinical deterioration and the occurrence of systemic coagulation abnormalities. Indications for antivenom include progressive swelling, elevated PT/INR, decreased fibrinogen, decreased platelets, and any systemic signs or symptoms of envenomation. The total number of doses of CroFab® is determined by the patient's response to the therapy and severity.

Severity (grade)	Manifestation	Amount of Antivenom Recommended
No envenomation (0)	Fang marks and minimal pain	0
Minimal (I)	Local swelling, absence of systemic signs, normal laboratory findings	2-4 vials
Moderate (II)	Swelling extending past bite site (6-12in), ≥1 systemic sign or symptoms, abnormal laboratory findings	5-9 vials
Severe (III)	Marked (>12in) swelling, tissue loss, multiple or severe systemic symptoms, immediate systemic signs, rapid progression of symptoms	10-15 vials
Very Severe (IV)	Rapid development of local reaction, ecchymosis, necrosis, blebs, blisters, swelling severe enough to	>15 vials

	obstruct venous or arterial flow, swelling may involve ipsilateral trunk	

CroFab® is unique in how it is produced. Immunogens from 4 snakes are produced in a lab. These snakes include the western diamondback rattlesnake, eastern diamondback rattlesnake, mojave rattlesnake, and the cottonmouth. These 4 snakes are chosen due to their clinical importance in snakebite cases in the US, the wide geographic range of these snakes, the genetic dissimilarities of the immunizing venoms, and the cross-reactivity with 10 other clinically important North American crotalid snake venoms. The immunogens are used to immunize separate flocks of sheep. The immunogens are recognized as foreign antigens, to which antibodies are produced. Antibodies are separated and cleaved by papain. This separates undigested immunoglobulin G and the Fab fragments. The 4 different monospecific Fab antivenoms are then mixed and standardized and this product is the antivenom. CroFab® works by binding and neutralizing the venom toxin. It removes the venom from the target tissue and eliminates it from the body.

CroFab® dosing is based on clinical response. Each dose contains up to 1 gram of total protein. Each vial is diluted with 18mL of NS and mixed by continuous manual inversion. Mixing the product can take up to 2 hours. The product is administered IV over 60 minutes at a rate of 25-50mL/hour for



the first 10 minutes. If no allergic reactions are observe, the rate should be increased to 250mL/hour. Physicians and nurses should be advised to monitor closely for any reaction. Epinephrine and diphenhydramine should be available during the infusion. Decreasing the rate of the infusion may help control some adverse effects.
The maintenance dose of CroFab® is used to help prevent rebound symptoms and worsening coagulopathy. After initial control, a 2-vial dose every 6 hours for up to 18 hours may be recommended.

Some specific warnings for CroFab® include papaya or papain allergies due to the use of papain in the production of the antivenom, possible hypersensitivity reactions because it is an animal product, mercury toxicity as the product does contain some thimerosol, and serum sickness which has been reported.

Several other adverse events that have been reported include back pain, chest pain, cellulitis, wound infection, chills, allergic reaction, urticarial, rash, pruritus, hypotension, asthma, couch, increased sputum, nausea, anorexia, coagulation disorder, ecchymosis, myalgia, nervousness, paresthesia, and subcutaneous nodules.

For further resources, check out www.crofab.com or

download the free phone application called "SnakeBite911". The phone application serves as an easy to use educational resources about North American Pit Vipers including how to avoid them, what to do and not to do, and what if a snake strike happens.

References:

1. Ann Emerg Med. 1996; 27(3): 321-6
2. Ann Emerg Med. 2001; 37 (2): 189-195
3. Ann Emerg Med. 2001; 38 (1): 55-61
4. Arch Intern Med. 2001; 161: 2030-2036
5. BMC Emerg Med. 2011; 11: 2-15
6. Emerg Med Clin N Am. 2004; 22: 423-443
7. CroFab® [package insert]. West Conshohocken, PA: BTG International Inc; 2010
8. J Am Coll Surg 2011; 212: 470-475
9. www.crofab.com

Syphilis Treatment: Alternatives during a Penicillin G Shortage

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Pfizer, the sole manufacturer of Bicillin® L-A (Penicillin G Benzathine; PGB) in the United States, informed consumers in April 2016, that they were experiencing a manufacturing delay.1 The backorder is expected to be resolved by late summer 2016. Until then, Pfizer is shipping approximately 30% of normal monthly demand and has recommended that distributors place PGB on allocation. To assist with the shortage of PGB, the Centers for Disease Control (CDC) recommends that the product be reserved for the treatment of syphilis instead of other infectious diseases where other antimicrobial agents are available.

PGB is the treatment of choice for syphilis, a systemic infection caused by the spirochete bacterium Treponema pallidum. The staging of syphilis determines the recommended PGB dose and duration. There are four stages of syphilis: primary, secondary, tertiary and latent. In primary syphilis, patients may have a painless chancre or open lesion, while secondary syphilis can manifest with macular or pustular skin lesions or lymphadenopathy after primary symptoms resolve. Patients with tertiary syphilis may experience damage to their heart, eyes, nervous system, bones, joints and brain. Neurosyphilis, a complication of T. pallidum invading the cerebrospinal fluid, can occur in any of these stages.

Recommended treatment options, including alternatives for adults and children infected syphilis are included in table 1.2-4 PGB is considered the only available safe treatment option for pregnant females and children with syphilis, and should be prioritized to these patient populations. Alternative regimens can be considered in nonpregnant females. However, Bicillin® C-R (penicillin G benzathine/penicillin G procaine) cannot be substituted to treat patients with syphilis as serum concentrations are only maintained for approximately 7 days. Due to the critical shortage that is currently occurring, it is vital providers adhere to the dosing recommendations.

Table 1: Recommended Treatment for Syphilis, by Stage, in Various Patient Populations2-4

Stage of Syphilis	Adult	HIV-infected Adult	Pregnant Female	Child (> 1 month)
Primary Syphilis	Doxycycline 100 mg PO BID for 14 days Azithromycin as single 2 gram PO dose	PGB 2.4 million units IM in a single dose	PGB 2.4 million units IM in a single dose	PGB 50,000 units/kg IM up to the 2.4 million unit adult dose
Secondary Syphilis	Doxycycline 100 mg PO BID for 14 days Azithromycin as single 2 gram PO dose	PGB 2.4 million units IM in a single dose	PGB 2.4 million units IM in a single dose	PGB 50,000 units/kg IM up to the 2.4 million unit adult dose
Tertiary Syphilis	Non-Neurosyphilis: PGB 7.2 million units total and administered as 3 doses of 2.4 million units IM weekly Neurosyphilis: Aqueous crystalline penicillin G 18 to 24 million units per day for 10 to 14 days (administered as 3 to 4 million units IV every 4 hours or continuous infusion)	PGB 7.2 million units total and administered as 3 doses of 2.4 million units IM weekly	Non-Neurosyphilis: PGB 7.2 million units total and administered as 3 doses of 2.4 million units IM weekly Neurosyphilis: Aqueous crystalline penicillin G 18 to 24 million units per day for 10 to 14 days (administered as 3 to 4 million units IV every 4 hours or continuous infusion)	
Early Latent Syphilis	PGB 2.4 million units IM in a single dose	PGB 2.4 million units IM in a single dose	PGB 2.4 million units IM in a single dose	PGB 50,000 units/kg IM and up to 2.4 million units in a single dose
Late Latent Syphilis	PGB 7.2 million units administered as 3 doses of 2.4 million units IM weekly	PGB 7.2 million units total and administered as 3 doses of 2.4 million units IM weekly	PGB 7.2 million units administered as 3 doses of 2.4 million units IM weekly	PGB 50,000 units/kg IM (up to the adult dose of 2.4 million units) given as 3 doses weekly

BID, twice per day; HIV, Human Immunodeficiency Virus; IM, intramuscularly; IV, intravenously; PO, orally; PGB, penicillin G benzathine

References:

1. Center for Disease Control and Prevention. (2016). Bicillin-LA (benzathine penicillin G) Shortage. Retrieved from http://www.cdc.gov/std/treatment/drugnotices/bicillinshortage.htm.
2. Gilbert DN, Chambers HF, Eliopoulos GM (Eds). The Sanford Guide to Antimicrobal Therapy 2016. 46thed. Antimicrobial Therapy, Inc, Sperryville, VA; 2010.
3. Center for Disease Control and Prevention (2015). 2015 Sexually Transmitted Diseases Treatment Guidelines. Retrieved June 17, 2016, from http://www.cdc.gov/std/tg2015/syphilis.htm.
4. Spornraft-Ragaller P, Abraham S, Lueck C, Meurer M. Response of HIV-infected patients with syphilis to therapy with penicillin or intravenous ceftriaxone. Eur J Med Res 2011;16(2):47-51.