Shingles (Herpes Zoster) is a viral infection of the nerve roots caused by the varicella-zoster virus, the same virus that causes chickenpox. In the U.S., 9 out of 10 adults have had chickenpox. Generally, a patient will suffer only one episode of shingles, and it is most common in individuals over the age of 50. It has been estimated that half of all individuals reaching the age of 85 will experience shingles at some point in their lives.

**Clinical Findings**

**Prodromal Stage**

The Prodromal Stage of shingles occurs before the rash appears. Initially, one may have a headache or be sensitive to light or feel like they have the flu but with no fever. About 48 hours prior to the skin eruptions, pain, itching, or tingling may occur and may persist and increase in intensity until after the lesions have appeared and then disappeared.

**Active Stage**

When a rash and blisters appear on the skin, this represents the Active Stage of shingles. Shingles lesions are grouped, deep-seated vesicles that are distributed unilaterally along a dermatome. They occur generally on the trunk or face. They fill with fluid and then crust over, taking 2 to 4 weeks to heal and may leave scars. Some patients experience only a mild rash and some experience no rash at all. Some lesions, up to about 20, may be found outside the affected dermatome; regional lymph glands may be tender and swollen. Characteristic in many patients is the rash that often appears as a band of blisters that wrap from the middle of the back around one side of the chest to the sternum. In some, it may occur around one eye or on one side of the neck or face. Although not a life-threatening condition, it can be very painful. A few patients may actually experience shingles pain without ever developing the rash.

**Postherpetic Neuralgia Stage**

Chronic pain from shingles occurs during the Postherpetic Neuralgia Stage or PHN. After the blisters/rash have disappeared, shingles pain may continue for a long time. PHN results when damaged nerve fibers send confused and exaggerated messages of pain from the skin to the brain. The pain is described as aching, burning, and stabbing and the area may be extremely sensitive to touch.

**Cause**

Shingles results from the varicella-zoster virus, which is the same virus that causes chickenpox. After experiencing chickenpox, the virus lies dormant in nerve tissue near the spinal cord and brain. The virus may be "reactivated" years later, resulting in shingles. The virus then travels up the nerve roots to the area of skin supplied by those nerve roots, which explains why the rash can wrap around either the left or right side of the body, generally from the middle of the back towards the chest. The reactivation may result from lowered immunity to infections with age, it is more common in older adults and in individuals with weak immune systems. Other predisposing factors may include stress, injury, certain medicines, etc. In general, causative factors include those over the age of 50, those having an autoimmune disease, those who smoke, etc. or those with other health problems, or stress that may weaken the immune system.

**Varicella-zoster virus highly magnified**
DIFFERENTIAL DIAGNOSIS
Other disorders that must be ruled out include poison oak, poison ivy, herpes simplex, and facial zoster. It is possible that the pain of pre-eruptive shingles may lead to a diagnosis of migraine, myocardial infarction, acute abdomen, herniated nucleus pulposus, and others, depending upon the dermatome involved.

TREATMENT
There is no “cure” for shingles, but treatment can make a patient feel more comfortable and may help prevent other problems. The table below lists the most common medications used for the treatment of shingles.

ADVANTAGES OF COMPOUNDED MEDICATIONS
Each patient may experience slightly different symptoms of shingles. The use of compounded medications allows you, the pharmacist, to select the medications that are appropriate for each patient’s symptoms, thus eliminating therapy that may not be effective.

DOSE FORMS
In addition to orally administered medications, topical creams, ointments, and solutions/suspensions are used to alleviate discomfort. These dose forms can be modified in strength and vehicle to meet the individual needs of the patients. Working with a compoundin pharmacist can aid in selection of vehicles to make the patient more comfortable.

PROGNOSIS
Generally, the eruptions last for two to four weeks and usually do not return. In 2% to 3% of patients, motor involvement that may lead to temporary palsy occurs. Shingles that occur around the eye may cause painful eye infections and result in vision loss. Also, depending upon which nerves are involved, shingles can cause encephalitis, hearing, or balance problems and facial paralysis. If the blisters are not properly cared for, bacterial skin infections may develop. In some patients, PHN can last for months or even years. PHN may affect the patient by making it difficult to eat, sleep, and perform daily activities. It can also lead to depression.

PREVENTION
The two vaccines that may help prevent shingles are described below:
1. Varicella vaccine (Varivax) is a routine childhood immunization to prevent chickenpox. It is also recommended for adults who have never had chickenpox. Although not guaranteed to do so, it may reduce the changes of complications and reduce the severity of shingles.
2. Varicella-zoster vaccine (Zostavax) can help prevent shingles in adults over 60 years old. Similar to the varicella vaccine, it doesn’t guarantee one will not get shingles, but it may reduce the course and severity of the disease and reduce the risk of PHN.

SYMPTOMS:
- Burning
- Chill (in some patients)
- Fatigue (in some patients)
- Fever (in some patients)
- Fluid-filled blisters that break open and crust over
- Generalized achingness (in some patients)
- Headache (in some patients)
- Itching
- Numbness or tingling
- Pain
- Red rash beginning a few days after the pain

TABLE. COMMON MEDICATIONS USED FOR THE TREATMENT OF SHINGLES

<table>
<thead>
<tr>
<th>IMMUNOCOMPETENT PATIENTS</th>
<th>IMMUNOCOMPROMISED PATIENTS</th>
<th>POSTHERPETIC NEURALGIA PATIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acyclovir (Zovirax)</td>
<td>Acyclovir Foscarnet</td>
<td>Aggressive antiviral therapy</td>
</tr>
<tr>
<td>Anticonvulsants (Gabapentin)</td>
<td></td>
<td>Baclofen</td>
</tr>
<tr>
<td>Amitriptyline</td>
<td></td>
<td>Capsaicin topical</td>
</tr>
<tr>
<td>Anti-itch creams</td>
<td></td>
<td>Clonidine</td>
</tr>
<tr>
<td>Famciclovir (Famvir)</td>
<td></td>
<td>Deoxy-D-Glucose</td>
</tr>
<tr>
<td>Narcotics (Oxycodone)</td>
<td></td>
<td>Gabapentin</td>
</tr>
<tr>
<td>Non-narcotic Analgesics</td>
<td></td>
<td>Ketamine</td>
</tr>
<tr>
<td>(Ibuprofen, Naproxen)</td>
<td></td>
<td>Ketoprofen</td>
</tr>
<tr>
<td>Numbing agents (Lidocaine, etc.)</td>
<td></td>
<td>Lidocaine topical</td>
</tr>
<tr>
<td>Oral antihistamines</td>
<td></td>
<td>Tetracaine</td>
</tr>
<tr>
<td>(Diphenhydramine)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systemic corticosteroids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tricyclic antidepressants (Amitriptyline)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valacyclovir (Valtrex)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMPOUNDED MEDICATIONS FOR THE TREATMENT OF SHINGLES

Rx Acyclovir 5% and Lidocaine 3% Base Topical Ointment
Rx Acyclovir 5% and Lidocaine Hydrochloride 2% Topical Gel
Rx Amtriptlyline 2%, Deoxy-D-Glucose 2%, Gabapentin 10%, Ketoprofen 5%, and Tetracaine 1% in Pluronic Lechitin Organogel Gel
Rx Aspirin 5% and Lidocaine Base 5% in Absolute Alcohol
Rx Aspirin 5% and Lidocaine 2-3% Topical Gel
Rx Aspirin 5% in Absolute Alcohol
Rx Aspirin 5% Topical Anhydrous Lotion
Rx Aspirin 5% Topical Ointment
Rx Baclofen 2%, Clonidine 0.2%, Gabapentin 6%, and Ketamine 5% in Pluronic Lechitin Organogel Gel
Rx Capsaicin 0.075%, Lidocaine Base 2%/Dexamethasone 0.1% Topical Lotion
Rx Capsaicin 0.075% Topical Cream
Rx Capsaicin 0.075% Topical Liniment
Rx Clonidine 0.2%, Gabapentin 6%, Ketamine 10%, and Lidocaine 5% in Pluronic Lechitin Organogel Gel
Rx Lidocaine Base 5% Topical Ointment
Rx Lidocaine Base 10% Topical Spray
Rx Lidocaine Base 30% Topical Gel
Rx Lidocaine Base 2% Topical Gel
Rx Lidocaine Hydrochloride 30% Topical Cream
Rx Lidocaine Hydrochloride 2% Topical Gel