

## **A pain in the nerve** - Shingles can make one miserable with prolonged pain

By: Robert Bernstein, MD

### **What is Shingles?**

Shingles is a skin disease caused by the same virus that causes chicken pox - herpes zoster

After chicken pox has resolved the virus never really goes away... it hides out, dormant and harmless in the spinal cord. In most people it never does any more harm. Under certain circumstances, perhaps immunity is suppressed by another virus, or sleep loss, or stress, the virus can re-activate. When it does, it spreads down a nerve and causes a mini case of chicken pox in the territory of that nerve.

People who have shingles are contagious - in the sense that they can give chicken pox to people who have no natural immunity to it, but you can't transmit shingles itself.

### **What is post herpetic neuralgia (PHN)?**

Since the virus infects and inflames a nerve, it is painful, and sometimes the pain begins even before the rash is apparent. The basic lesions heal in 2-3 weeks, but in a small proportion of cases the pain persists for a year or more. This is called post-herpetic neuralgia or PHN. The nerve pain is felt as a burning sensation, and it can be mild or intense and anything in between. Some people develop debilitating pain that lasts years, most do not.

### **How common is shingles?**

Three people in a thousand between 40 and 64 years of age will develop shingles. Of people over 75, 7.5 in a thousand will develop shingles. In people over 60 years of age, who develop shingles, 11% will go on to have PHN

### **How do we treat shingles?**

Shingles can be treated with antiviral drugs if caught in the first 72 hours. Treatment reduces the time to healing but may not reduce the chances of getting post-herpetic neuralgia.

### **How do we treat PHN?**

One approach has been to initiate antiviral treatment along with another drug that treats the nerve irritability at the same time, and there is some evidence that this approach works.

In addition to drugs that reduce nerve irritability, patches containing local anesthetic have been used, and preparations of hot peppers (capsaicin) are also used, the former to "numb" the area, the latter to in effect re-boot the affected nerves so they become less sensitive to minor stimulation.

Another approach is to inject the affected nerve with local anesthetic. This needs to be repeated 3 or 4 times, and is not without risk especially if the nerve follows a rib in the chest, though complications when an experienced physician does the job are quite rare.

### **Does Zostavax work?**

The main research studies were funded by the pharmaceutical company that makes the vaccine and therefore the results need to be taken with a grain of salt. Both were published in highly reputable medical journals with a tough editorial process, so we can have some confidence that the studies have been independently reviewed.

One trial of over 30 thousand patients age 60 and older showed that 3.42% of patients who did not get vaccinated got shingles in three years, and if vaccinated 1.67% did. We would have to treat 58 people to prevent one case of shingles. In the non-vaccinated group 0.42% of patients got PHN, and 0.14% of the vaccinated group got it. We would have to vaccinate 358 people to prevent one case of PHN.

The conclusion is that the vaccine is effective at preventing shingles, and very few people had any side effects, (1.36% of patients getting a PLACEBO vaccine reported side effects, and 1.96% of the vaccine group got side effects.

This illustrates an important concept. The RELATIVE effect of the vaccine is pretty good - a reduction of almost 50% in the chances of getting shingles, and reduction of 33% in the risk of getting PHN.

Here's the catch. The absolute numbers are pretty small.

Imagine that a new treatment reduces the risk of something from very unlikely to extremely unlikely then we have to ask if it is worth it. The answer lies in the severity of what we are preventing. If the disease we want to prevent is benign and self-limited, then maybe not. If it is a life threatening complication we are preventing then it almost certainly is. PHN falls in between. It doesn't kill you, but it makes your life miserable for a long period of time.

How do you decide? Cost may be a factor. The vaccine costs about \$200, and it has not been studied long enough to know how long its protection will last and if a booster is necessary.

The chance of having complications or side effects may be a factor. Zoster vaccine has not been around long enough to be certain that there aren't some very rare side effects that haven't been seen yet but overall it seems quite safe.

The effectiveness of other treatments if you get PHN is a factor. PHN subsides slowly by itself and treatments make it much more tolerable, though in some tiny proportion of patients nothing works well at all.

### **Who should get it?**

In Canada the zoster vaccine is recommended for everyone over 60, whether or not you had either chicken pox or shingles in the past. The reasoning is that shingles is enough of a problem in itself to be worth preventing. It has not been tested in people who have an immune deficiency like HIV, but these people are at MORE risk of shingles and PHN so they should probably get it too.

### **Relative value against flu shots**

Shingles is painful, but the flu can kill you. Get a flu shot every fall!

Reference: Kolber MR, Korowynk C, and Nickonchuk T. Zoster Vaccine. Canadian Family Physician volume 59, February 2013, page 157.