

SHINGLES (HERPES ZOSTER INFECTION)

Lyn Paul Taylor, A.A., B.A., M.A., R.P.T.

(Editing Assistant and Computer Consultant: Joanna Soon, B.S.)

Shingles (*herpes zoster* infection or *acute posterior ganglionitis*) is caused by a localized viral infection of one or more posterior (dorsal) root ganglia, resulting in *vesicular eruptions* and *neuralgic pain* within the dermatomes supplied by the *peripheral sensory nerve roots* being attacked.

The *herpes zoster virus* is a mutated form of the varicella virus (*chicken pox*). The infection most often expresses itself when an individual who has previously suffered from chicken pox has been *re-exposed* (either directly or indirectly) to the virus and had additionally suffered *physical or emotional stress*. It has been noted to accompany *pneumonia, tuberculosis, Hodgkin's disease, uremia*, and as a complication of other types of lesions, occurring near the affected dorsal root ganglia (fracture or dislocation of the spinal column, neoplasm, carcinoma, syphilis, subarachnoid hemorrhage, and meningitis included).

Generally, the viral attack on the nervous tissues results in the development of an inflammatory process that may involve the tissues of the sensory root ganglia, posterior horn of the gray matter, the meninges or the dorsal ventral roots. Cutaneous eruptions or vesicle formations containing a serous exudate beneath the stratum corneum are common symptomatology, and occur as the result of inflammatory infiltration of the epidermis and dermis along the pathway of the involved *peripheral nerve distribution*.

Prodromal symptoms include *chills, fever, malaise*, and *gastrointestinal disturbances*, which may occur three to four days before eruptions appear on the skin. The eruptions appear as crops of *vesicles* on an erythematous base that eventually dry up and scab. If untreated, the virus may cause *permanent* damage to the *sensory nerve*, resulting in *post herpetic neuralgia*, a persistently painful condition that may continue for the life of the subject.

If the *geniculate ganglion* is affected, *earache* may be present with vesicular eruptions in the external auditory canal and on the auricle, soft palate and anterior pillar of the fauces. *Facial palsy* may occur on the involved side as additional sequelae. If the *gasserian ganglion* is affected, the pain and vesicular eruptions will occur in the distribution of the ophthalmic division of the *fifth (V) cranial nerve* and may cause *ulceration* and *opacity* of the cornea. Occasionally the *third (III) cranial nerve* may be injured, affecting the eye and its ability to move.

Shingles is one of the syndromes commonly seen in the early stages of infection by the *Human Immunodeficiency Virus (HIV)* (possibly fostered by the *emotional stress* involved and not as a direct result of the infection).

Treatment

Treatment of *shingles* entails using ultrahigh frequency sound (ultrasound) to disrupt or “*flatten*” the herpes zoster virus attacking the dorsal nerve root ganglion.

Application:

- A *DSR survey* of the paraspinal areas (on both sides of the spine) should be made to establish the presence and extent of any inflammation provoked by herpes zoster infection. Generally, the affected ganglions will be precisely located through the survey, but visual identification may be nearly as adequate.
- The treatment site should be coated with an effective *anti-inflammatory* coupling agent (*topical ibuprofen* is favorite).
- *Ultrasound* application needs *only* to be over the *ganglion site*, lateral to the appropriate vertebral disc space(s). The ultrasound should be applied at a *1.8 W/cm²* level, for six minutes, with a *1 Mhz pulsed* waveform.
- After a half an hour's rest, the site should be ultrasounded again.

Subjects generally report an immediate decrease in the intensity of the pain after the first session and as much as fifty percent after the second. Treatments should occur *twice daily* (with at least an half an hour between applications) to a limit of *20 treatments*. If treatment begins soon after initial appearance, all symptoms should disappear within two weeks, except for the final healing stages of the eruptions.

[See ULTRAHIGH FREQUENCY SOUND, Precautions]

References:

- J. Adles, F. Emunson, M. Agresti, and R. Rhoden, "Use of Ultrasonic Radiation for Treatment of Herpes Zoster," *American Institute for Ultrasonics in Medicine, Proceedings of the Annual Conference on Ultrasonic Treatment*, Detroit, 1955. Pp. 115-123
- H.C. Bickley, *Practical Concepts in Human Disease*, The Williams & Wilkins Co., Baltimore, Md., 1975. Pp. 114-118
- Merck Manual of Diagnosis and Therapy*, Merck & Co., Inc., Rahway, NJ, 1987. Pp. 168-169
- L.P. Taylor, T. Hui, *The Taylor Technique of Soft Tissue Management, Inflammation: Evaluation & Treatment*, 2002. Pp. 218-219
- "Ultrasonic Energy in Medicine," *International Record of Medicine & G.P. Clinics*, MD Publications Inc., Vol. 168, No. 12, December, 1955. Pp. 803-806

