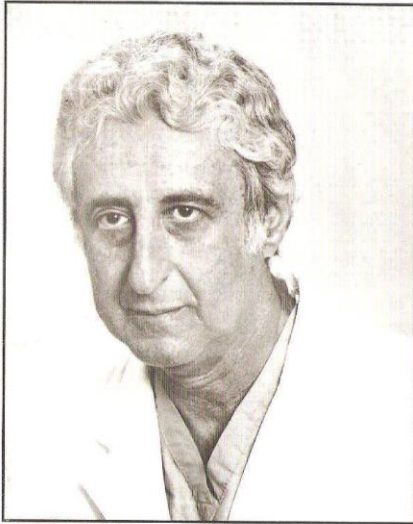


St. Joseph neurosurgeon makes major anatomical discovery



*Richard Hirshberg, M.D.
St. Joseph neurosurgeon emeritus*

Cancer patients who suffer excruciating pain have an alternative to heavy doses of morphine or other drugs. It involves a unique surgical procedure to block the flow of pain signals to the brain, based on a discovery of a previously unknown tract in the spinal cord.

Finding the tract represents a major anatomical breakthrough, says Richard Hirshberg, M.D., who first performed this surgery at St. Joseph in the 1980s. Eight patients had the operation during subsequent years and deemed it a great success. All of them experienced pain related to cancers of the colon, ovaries, liver and other organs in the pelvic region. Before surgery, they described their pain as "unbearable," "excruciating" and "intolerable." Afterwards, all were relatively free of pain, and required little or no medication.

Dr. Hirshberg used a surgical microscope at high magnification to sever the tract at the level of the tenth thoracic vertebra to stop the flow of pain impulses from the involved pelvic organs to the brain. The successful results of the clinical cases are supported by further research performed by the University of Texas Medical Branch at Galveston.

Dr. Hirshberg submitted a spinal cord from an operated patient who expired to William Willis, Jr., M.D., Ph.D., an authority on spinal cord sensory pathways and chairman of the department of anatomy and neurosciences at UTMB. Examination of the cord by staining techniques revealed a tract that had not been previously described. Dr. Willis and his associates further confirmed the presence of this tract using electrophysiological and staining techniques on animals.

An in-depth article concerning this discovery

appeared in the October issue of the journal "Pain" and is called "Is There a Pathway in the Posterior Funiculus That Signals Visceral Pain?"

Last year, Dr. Hirshberg presented these findings to the European Congress of Neurosurgery in Berlin. The discovery was received with great interest by participating neurosurgeons. The anatomy of the spinal cord with reference to sensory tracts was thought to be fully described 50 to 75 years ago. The alternative to surgery is an expensive pump that injects morphine around the spinal cord.

Since Dr. Hirshberg's discovery, Haring Nauta, M.D., a UTMB neurosurgeon, has performed the procedure at a higher level to treat a patient who was cancer free but had intolerable pain. Dr. Hirshberg is very enthusiastic about Dr. Nauta's approach to non-cancerous situations since it greatly expands the possible use of this pain relief surgery.

Dr. Hirshberg practiced neurosurgery at St. Joseph for 30 years and was Neurosurgery Department Chairman much of that time. He was also the SJH Medical Staff Chief and currently sits on the hospital's Local Governing Body.

When asked why he chose that profession, he recalled a boyhood experience. "I was 12 years old when I came across the word 'neurosurgeon' in *Life Magazine* and went to the dictionary to see what it meant," Dr. Hirshberg says. "I was delighted to learn about an area of medicine that focused on the brain and nervous system, and I chose my career right then and there."