

## Education Corner

By David Provenzano, M.D., Executive Director



*Dr. Provenzano is a teacher, author, lecturer, researcher and is board certified in anesthesiology and pain medicine. He is an adjunct assistant professor and clinical instructor at Duquesne University, President of the American Chronic Pain association, an anesthesiologist at Ohio Valley General Hospital and a speaker at pain forums nationwide where doctors and pain experts come to hear the latest in pain techniques. Dr. Provenzano's research and clinical expertise combine to provide an accurate diagnosis and safe, effective treatment.*

## Cervical Radicular Pain and Cervical Radiculopathy

All through the United States people are experiencing neck pain. This pain may stem from a previous spinal cord injury, disc herniation, or arthritic conditions. Each year, between 11% and 14.1% of workers reported being limited in their activities due to neck pain.

Cervical radicular pain/radiculopathy is caused by any condition that puts pressure on the nerves where they exit the spinal column. Mechanical neck pain is caused by injury or inflammation in the structures of the neck, such as the discs, facet joints, ligaments, or muscles.

The main causes of cervical radicular pain/radiculopathy include disc herniation, spinal instability, arthritis, and stenosis (narrowing of the spinal column). Those with cervical radicular pain/radiculopathy often notice sensory changes in their neck and arms, which cause pressure on a cervical nerve root.

In a population between 13 and 91 years of age, the annual incidence of cervical radicular pain/radiculopathy was 83 per 100,000. Cervical radicular pain/radiculopathy is most significant within the 50-54 year old age group. Treatment options typically consist of medication and physical therapy.

### Diagnosis

The diagnosis of cervical radicular pain is made based on the combination of history, clinical examination, and diagnostic tests. A neurological examination should include testing for strength, sensation, and tendon reflexes. Your doctor will ask questions about your symptoms and how your problem is affecting your daily activities. Your answers can help determine which nerves are being affected.

Next, an examination will take place to see which neck movements cause pain or other symptoms. Your skin sensation, muscle



strength, and reflexes are tested in order to assist in the diagnosis.

X-rays of the cervical spine can show the cause of pressure on the nerve. The images show whether degeneration has caused the space between the vertebrae to collapse. They may also show if a bone spur is pressing against a nerve.

If more information is needed, your doctor may order magnetic resonance imaging (MRI). The MRI machine uses magnetic waves rather than X-rays to show the soft tissues of the body. This test gives a clear picture of the discs, nerves, and other soft tissues in the neck. The test does not require any special dye or needles and is painless.

### Treatment

The best treatment for cervical radicular pain and/or radiculopathy consists of a multimodal treatment plan which may include physical therapy, medication management, interventional techniques, and possibly surgery.

- **Nonsteroidal anti-inflammatories (NSAIDs).** These include drugs such as ibuprofen and naproxen and assist in reducing inflammation and swelling.
- **Oral corticosteroids.** A short course of oral corticosteroids may also help reduce swelling, as well as pain.
- **Minimally invasive spinal injections.** Minimally invasive spinal injections involve the injections of steroid into the epidural space. The epidural space is located in the spine just outside of the sac containing the spinal fluid. The steroids are injected into your epidural space to reduce inflammation and swelling in and surrounding your spinal nerve roots and adjacent tissues. By reducing inflammation, your level of pain may be decreased. If the pain is significantly improved, no further injection is needed unless the pain begins to come back. You may be scheduled for one to three injections depending on your symptoms and degree of improvement after each injection.
- **Physical Therapy.** Physical therapy can help with neck muscle stretching and strengthening. Direction can also be provided by therapists as to when you can return to participating in specific activities of daily living.
- **Surgery.** Most people with cervical radicular pain/radiculopathy get better without surgery. In some cases individuals do not get relief and they may require surgery.

For additional information on the treatment of cervical radicular pain at the Institute for Pain Diagnostics and Care, please visit our Website at [www.ifpdac.org](http://www.ifpdac.org) or call 412-777-6400.

Dr. Provenzano and the experienced staff at the Institute for Pain Diagnostics and Care treat many patients with cervical radicular pain/radiculopathy. If you are suffering from cervical radicular pain/radiculopathy please call the Institute for Pain Diagnostics and Care at 412-777-6400 to schedule an appointment.

## IPDC Physician Selected to Serve on The American Society of Regional Anesthesia and Pain Medicine Research Committee

Ohio Valley General Hospital's Institute for Pain Diagnostics and Care physician, Dr. David A. Provenzano has been selected to serve on the American Society of Regional Anesthesia and Pain Medicine (ASRA) Research Committee.

Dr. Provenzano will be serving a three year term and will be working to improve the quality of the organization.

The Research Committee provides oversight for all the research activities of the Society. Dr. Provenzano will be joining with other members to review all applications for grants from funds for basic science and clinical investigations and educational projects relating to regional anesthesia for surgery, obstetrics, and pain medicine. In addition, Dr. Provenzano will be recommending funding of

such applications.

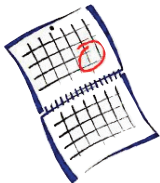
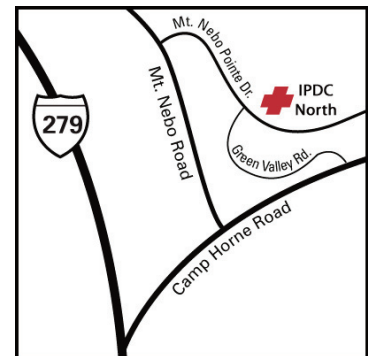
ASRA is the largest subspecialty society in anesthesiology with approximately 7,400 members, including physicians and scientists and a large international membership. The Society is also recognized as the primary source of education in comprehensive anesthesiology by all publics, including all anesthesiology providers.

"It's an honor to be selected to this Committee and I look forward to working other specialists around the country to advance the field of anesthesia and pain medicine," said Provenzano.

For additional information on Ohio Valley General Hospital or the Institute for Pain Diagnostics and Care, please visit [www.ohiovalleyhospital.org](http://www.ohiovalleyhospital.org) or [ifpdac.org](http://ifpdac.org).

## New Location

We've added a new office suite in North Hills of Pittsburgh. Conveniently located near Interstate 279, our specialized and advanced pain treatment services are now available to residents in this area.



## Mark the Date

*Dr. Provenzano's recent and upcoming speaking engagements.*

### Duquesne University Mylan School of Pharmacy.

May - 2010

Principles of anesthesiology  
General anesthetic pharmacology  
Local anesthetic pharmacology

### Grand Round Presentation at Case Western Reserve University School of Medicine.

May 2010

Radiation safety for interventional pain procedures.

### Pittsburgh Rotary Club

### Pain Medicine and Management Presentation.

Date: Wednesday, June 2, 2010

Time: 1 p.m.

Omni William Penn Hotel  
530 Grant Street  
Pittsburgh, PA 15219

For More Information: 412-471-6210

### What are Grand Rounds?

Grand Rounds are a ritual of medical education, consisting of presenting the medical problems and treatment of a particular patient to an audience consisting of doctors, residents, and medical students.