Thoracic radiculopathy

Thoracic radiculopathy is the pain and resulting symptoms associated with compression on the nerve or nerve roots of the thoracic spine. When the symptoms radiate or refer distally from the spine into the back and outward along the ribs to the anterior chest wall it is considered radiculopathy.

Epidemiology

Thoracic radiculopathy represents an uncommon spinal disorder that is frequently overlooked in the evaluation of spinal pain syndromes [1].

Etiology

Anything that encroaches on, or presses on a nerve, and disrupts its function at the nerve root can be considered a cause of nerve root entrapment.

Degenerative disc disease that results in wear on the intervertebral disc, and a reduction in disc height may result in loss of space at the intervertebral foramen. Herniated discs can place pressure on the nerve in addition to inflammation that irritates the nerve. Degenerative joint disease that results in the formation of bony spurs on the facet joints can narrow the intervertebral space placing pressure on the exiting nerve. Trauma or muscle spasm can put pressure on the peripheral nerve, producing symptoms along that nerve's distribution path.

The symptoms of thoracic radiculopathy, regardless of the cause, are often not recognized, as there is typically no associated motor deficit. When the etiology is disc herniation or trauma, motor deficit or myelopathy may be observed in the advanced stages.

Furthermore, the typical presentation of band-like thoracic or abdominal pain can mimic a myriad of conditions [2].

With many differential diagnoses to consider, it is not surprising that thoracic radiculopathy is often not discovered for months, or years, after symptoms arise [3].

Rarer causes of thoracic radiculopathy described in the literature include post-thoracotomy, paravertebral mesothelial cyst, and myodil cyst [4].

Thoracic radiculopathy has been reported as a complication of spinal cord stimulation (SCS) paddle lead implantation by several authors and commonly presents as abdominal pain.

Lee et al., from the Houston Methodist Hospital performed a search of all patients who underwent either placement of a new epidural paddle lead electrode or revision of an epidural paddle lead electrode for SCS in the thoracic region from January 2017 to January 2018. They then investigated all

cases of immediate postoperative abdominal pain.

They identified 7 patients who had immediate postoperative abdominal pain among 86 cases of epidural SCS procedures. Most patients were discharged on postoperative days 1-3. No patients required revisions or removals of their SCS for any reason.

They conclude that the etiology of immediate postoperative abdominal pain after thoracic paddle lead implantation for SCS is most likely thoracic radiculopathy. They hypothesized that small, transient epidural hematomas could be the cause of this thoracic radiculopathy. They argue that all patients with immediate postoperative abdominal pain and no other neurologic deficits after thoracic paddle lead implantation for SCS should first be treated conservatively with observation and pain management [5].

References

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