D. SPINAL PAIN, SECTION 2: SPINAL AND RADICULAR PAIN SYNDROMES OF THE CERVICAL AND THORACIC REGIONS

N.B. For explanatory material on this section and on section G, Spinal and Radicular Pain Syndromes of the Lumbar, Sacral, and Coccygeal Regions, see pp. 11-16 in the list of Topics and Codes. Please also note the comments on coding on p. 17.

GROUP IX: CERVICAL OR RADICULAR SPINAL PAIN SYNDROMES

Cervical Spinal or Radicular Pain Attributable to a Fracture (IX-1)

Definition
Cervical spinal pain occurring in a patient with a history of injury in whom radiography or other imaging studies demonstrate the presence of a fracture that can reasonably be interpreted as the cause of the pain.

Clinical Features
Cervical spinal pain with or without referred pain.
Diagnostic Features
Radiographic or other imaging evidence of a fracture of one of the osseous elements of the cervical vertebral column.

Schedule of Fractures

IX- 1.1(S)(R)
Fracture of a Vertebral Body
Code 133.X1eS/C 233.X1eR
IX- 1.2(S)
Fracture of a Spinous Process (Synonym: “clay-shovelers fracture”)
Code 133.XIfS
IX-1.3(S)(R)
Fracture of a Transverse Process
Code 133.XlgS/C 233.X1fR
IX- 1.4(S)(R)
Fracture of an Articular Pillar
Code 133.XIhS/C 233.X1gR
IX-1.5(S)(R)
Fracture of a Superior Articular Process
Code 133.X1iS/C 233.X1hR
IX- 1.6(S)(R)
Fracture of an Inferior Articular Process
Code 133.X1jS/C 233.X1iR
IX-1.7(S)(R)
Fracture of Lamina
Code 133.X1kS/C 233.X1uR
IX-1.8(S)(R)
Fracture of the Odontoid Process
Code 133.XIIS/C 233.X1vR
IX-1.9(S)(R)
Fracture of the Anterior Arch of the Atlas

Code 133.X1mS/C 233.X1pR

IX-1.10(S)(R)
Fracture of the Posterior Arch of the Atlas
Code 133.XlnS/C 233.XIqR
IX- 1.11(S)(R)
Burst Fracture of the Atlas
Code 133.X1oS/C 233.XlwR

Cervical Spinal or Radicular Pain Attributable to an Infection (IX-2)

Definition
Cervical spinal pain occurring in a patient with clinical or other features of an infection, in whom the site of infection can be specified and which can reasonably be interpreted as the source of the pain.

Clinical Features
Cervical spinal pain with or without referred pain, associated with pyrexia or other clinical features of infection.

Diagnostic Features
A presumptive diagnosis can be made on the basis of an elevated white cell count or other serological features of infection, together with imaging evidence of the presence of a site of infection in the cervical vertebral column or its adnexa. Absolute confirmation relies on histological and/or bacteriological confirmation using material obtained by direct or needle biopsy.

Schedule of Sites of Infection

IX-2. 1(S)(R)
Infection of a Vertebral Body (Osteomyelitis)
Code 132.X2aS/C 232.X2iR
IX-2.2(S)(R)
Septic Arthritis of a Zygapophysial Joint
Code 132.X2bS/C 232.X2jR
IX-2.3(S)(R)
Septic Arthritis of an Atlanto-Axial Joint
Code 132.X2cS/C 232.X2cR
IX-2.4(S)(R)
Infection of the Prevertebral Muscles or Space
Code 132.X2dS/C 232.X2kR
IX-2.5(S)(R)
Infection of an Intervertebral Disk (Diskitis)
Code 132.X2eS/C 232.X21R
IX-2.6(S)(R)
Infection of an Interbody Graft
Code 132.XtS/C 232.X2mR
IX-2.7(S)(R)
Infection of a Posterior Fusion
Code 132.X2gS/C 232.X2nR
IX-2.8(S)(R)

Infection of the Epidural Space (Epidural Abscess)
Code 132.X2hS/C 232.X2oR

IX-2.9(S)(R)
Infection of the Spinal Meninges (Meningitis)
Code 103.X2cS/C 203.X2cR

IX-2.10(S)(R)
Herpes Zoster Acute
Code 103.X2dS/C 203.X2dR

IX-2.1 1(S)(R)
Postherpetic Neuralgia
Code 103.X2eS/C 203.X2eR

IX-2.12(S)(R)
Syphilis: Tabes Dorsalis and Hypertrophic Pachymeningitis
Code 107.X2*S/C 207.X2*R

IX-2.13(S)(R)
Other Syphilitic Changes, Including Gumma
(No Code)

Cervical Spinal or Radicular Pain Attributable to a Neoplasm (IX-3)

Definition
Cervical spinal pain associated with a neoplasm that can reasonably be interpreted as the source of the pain.

Clinical Features
Cervical spinal pain with or without referred pain.

Diagnostic Features
A presumptive diagnosis may be made on the basis of imaging evidence of a neoplasm that directly or indirectly affects one or other of the tissues innervated by cervical spinal nerves. Absolute confirmation relies on obtaining histological evidence by direct or needle biopsy.

Schedule of Neoplastic Diseases

IX-3. I (S)(R)
Primary Tumor of a Vertebral Body
Code 133.X4aS/C 233.X4aR

IX-3.2(S)(R)
Primary Tumor of Any Part of a Vertebra Other than Its Body
Code 133.X4bS/C 233.X4bR

IX-3.3 (S)(R)
Primary Tumor of a Zygapophysial Joint
Code 133.X4cS/C 233.X4cR

IX-3.4(S)(R)
Primary Tumor of an Atlanto-Axial Joint
Code 133.X4dS/C 233.X4dR

IX-3.5(S)(R)
Primary Tumor of a Paravertebral Muscle
Code 133.X4eS/C 233.X4eR

IX-3.6(S)(R)

Primary Tumor of Epidural Fat (e.g., lipoma)
Code 133.X4fS/C 233.X4yR

IX-3.7(S)(R)
Primary Tumor of Epidural Vessels (e.g., angioma)
Code 133.X4gS/C 233.X4gR

IX-3.8(S)(R)
Primary Tumor of Meninges (e.g., meningioma)
Code 103.X4aS/C 203.X4aR

IX-3.9(R)
Primary Tumor of Spinal Nerves (e.g., neurofibroma, schwannoma, neuroblastoma)
Code 203.X4bR

IX-3. I O(S)(R)
Primary Tumor of Spinal Cord (e.g., glioma)
Code 103.X4cS/C 203.X4cR

IX-3.1 I (S)(R)
Metastatic Tumor Affecting a Vertebra
Code 133.X4hS/C 233.X4gR

IX-3.12(S)(R)
Metastatic Tumor Affecting the Vertebral Canal
Code 133.X4iS/C 233.X4uR

IX-3.13(S)(R)
Other Infiltrating Neoplastic Disease of a Vertebra (e.g., lymphoma)
Code 133.X4jS/C 233.X4qR

Cervical Spinal or Radicular Pain Attributable to Metabolic Bone Disease (IX-4)

Definition
Cervical spinal pain associated with a metabolic bone disease that can reasonably be interpreted as the source of the pain.

Clinical Features
Cervical spinal pain with or without referred pain.

Diagnostic Features
Imaging or other evidence of metabolic bone disease affecting the cervical vertebral column, confirmed by appropriate serological or biochemical investigations and/or histological evidence obtained by needle or other biopsy.

Schedule of Metabolic Bone Diseases

IX-4. I (S)(R)
Osteoporosis of Age
Code 132.X5aS/C 232.X5gR

IX-4.2(S)(R)
Osteoporosis of Unknown Cause
Code 132.X5bS/C 232.X5hR

IX-4.3(S)(R)

Osteoporosis of Some Known Cause Other than Age
Code 132.X5cS/C 232.X5iR

IX-4.4(S)(R)
Hyperparathyroidism
Code 132.X5dS/C 232.X5jR

IX-4.5(S)(R)
Paget's Disease of Bone
Code 132.X5eS/C 232.X5kR

IX-4.6(S)(R)
Metabolic Disease of Bone Not Otherwise Classified
Code 132.X5fS/C 232.X51R

Cervical Spinal or Radicular Pain Attributable to Arthritis (IX-5)

Definition
Cervical spinal pain associated with arthritis that can reasonably be interpreted as the source of the pain.

Clinical Features
Cervical spinal pain with or without referred pain.

Diagnostic Features
Imaging or other evidence of arthritis affecting the joints of the cervical vertebral column.

Schedule of Arthritides

IX-5. I (S)(R)
Rheumatoid Arthritis
Code 132.X3aS/C 232.X3aR

IX-5.2(S)(R)
Ankylosing Spondylitis
Code 132.X8aS/C 232.X8aR

IX-5.3(S)(R)
Osteoarthritis
Code 138.X6aS/C 238.X6aR

IX-5.4(S)(R)
Seronegative Spondylarthropathy Not Otherwise Classified
Code 123.X8aS/C 232.X8aR

Remarks
Osteoarthritis is included in this schedule with some hesitation because there is only weak evidence that indicates that this condition as diagnosed radiologically is causally associated with spinal pain.
The alternative classification to "cervical pain due to osteoarthrosis" should be "cervical zygapophysial joint pain" if the criteria for this diagnosis are satisfied (see IX-11) or "cervical spinal pain of unknown or uncertain origin" (see IX-7).

The condition of "spondylosis" is omitted from this schedule because there is no significant positive correlation between the radiographic presence of this condition and the presence of spinal pain (Friedenberg and Miller 1963; Heller et al. 1983). There is no evidence that this condition represents anything more than age-changes in the vertebral column.

References

Friedenberg ZB, Miller WT. Degenerative disk disease of the cervical spine. J Bone Joint Surg 1963;45A:1171–8.

Heller CA, Stanley P, Lewis-Jones B, Heller RF. Value of X-ray examinations of the cervical spine. Br Med J 1983;287:1276–9.

Cervical Spinal or Radicular Pain Associated with a Congenital Vertebral Anomaly (IX-6)

Definition

Cervical spinal or radicular pain associated with a congenital vertebral anomaly.

Clinical Features

Cervical spinal pain with or without referred pain.

Diagnostic Features

Imaging evidence of a congenital vertebral anomaly affecting the cervical vertebral column.

Remarks

There is no evidence that congenital anomalies per se cause pain. Although they may be associated with pain, the specificity of this association is unknown. This classification should be used only when the cause of pain cannot be otherwise specified and there is a perceived
need to highlight the presence of the congenital anomaly, but should not be used to imply that the congenital anomaly is the actual source of pain.

Code

23.X0 * S/C
223.XOR

Cervical Spinal Pain of Unknown or Uncertain Origin (IX-7)

Definition

Cervical spinal pain occurring in a patient whose clinical features and associated features do not enable the cause and source of the pain to be determined, and whose cause or source cannot be or has not been determined by special investigations.

Clinical Features

Cervical spinal pain with or without referred pain.

Diagnostic Features

Cervical spinal pain for which no other cause has been found or can be attributed.

Pathology

Unspecified.

Remarks
This definition is intended to cover those complaints that for whatever reason currently defy conventional diagnosis. It does not encompass pain of psychological origin. It presupposes an organic basis for the pain, but one that cannot be or has not been established reliably by clinical examination or special investigations such as imaging techniques or diagnostic blocks.

This diagnosis may be used as a temporary diagnosis. Patients given this diagnosis could in due course be accorded a more definitive diagnosis once appropriate diagnostic techniques are devised or applied. In some instances, a more definitive diagnosis might be attainable using currently available techniques, but for logistic or ethical reasons these may not have been applied.

Upper Cervical Spinal Pain of Unknown or Uncertain Origin (IX-7.1)

Definition
As for IX-7, but the pain is located in the upper cervical region.

Clinical Features
Spinal pain located in the upper cervical region.

Diagnostic Criteria As for IX-7, save that the pain is located in the upper cervical region.

Pathology
Unspecified.

Remarks As for IX-7.

Code
13X.X8cS/C
23X.X8cR

Lower Cervical Spinal Pain of Unknown or Uncertain Origin (IX-7.2)

Definition
As for IX-7, but the pain is located in the lower cervical region.

Clinical Features
Spinal pain located on the lower cervical region.

Diagnostic Criteria
As for IX-7, save that the pain is located in the lower cervical region.

Pathology
Unspecified.

Remarks
As for IX-7.

Code

13X.X8dS/C
23X.X8dR

Cervico-Thoracic Spinal Pain of Unknown or Uncertain Origin (IX-7.3)

Definition
As for IX-7, but the pain is located in the cervicothoracic region.

Clinical Features
Spinal pain located in the cervico-thoracic region.

Diagnostic Criteria
As for IX-7, save that the pain is located in the cervicothoracic region.

Pathology Unspecified.

Remarks As for IX-7.

Code
13X.X8eS/C
23X.X8eR

Acceleration-Deceleration Injury of the Neck (Cervical Sprain) (IX-8)

Definition
Cervical spinal pain precipitated by an event involving sudden acceleration or deceleration of the head and neck with respect to the trunk.

Clinical Features
The pain is aggravated by motion of the cervical spine, tension, sitting, or reading and is often accompanied by muscle spasm and trigger points in one or more muscles of the occiput or neck. Prolonged or repetitive use of the shoulder girdle muscles, e.g., carrying dishes or washing them, may induce radiation of pain in the upper extremity. Push/pull activities, e.g., vacuum cleaning, may aggravate pain also. Cervical spinal pain with or without referred pain in a patient describing a history of sudden acceleration or deceleration of the head and neck of a magnitude sufficient to be presumed to have injured one or more of the components of the cervical spine.

Diagnostic Criteria
The presence of clinical features described above.

Pathology
No single pathologic entity can be ascribed to this condition. The spinal pain can be caused by any of a variety of injuries that may befall the cervical spine.

Remarks
The use of the term “whiplash” is not recommended.

This classification is essentially a clinical diagnosis. A more specific diagnosis could be entertained if the appropriate diagnostic criteria could be satisfied, for example sprain of an anulus fibrosus, zygapophysial joint pain, muscle sprain, muscle spasm. Certain associated features such as dizziness, tinnitus, and blurred vision occur in some cases, often those which are relatively severe. Sleep disturbance and mood disturbance often appear for months or longer in the more severe cases, but these are a minority of all cases. These associated features may be coincidental or expressions of an anxiety state or a secondary response to chronic pain. Their presence or absence is immaterial to the formulation of the diagnosis.

Code
133.XlaS/C
233.XlaS/C
233.X1aR

References
Bogduk N. The anatomy and pathophysiology of whiplash. Clin Biomech 1986;1:92–101.

Macnab I. The whiplash syndrome. Clin Neurosurg 1973;20:232–41.

Mendelson G. Not "cured by a verdict": effect of legal settlement on compensation claimants. Med J Aust 1982;2:132–4.

Merskey H. Psychiatry and the cervical sprain syndrome. CMAJ 1984;130:1119–21.

Torticollis (Spasmodic Torticollis) (IX-9)

Definition
Cervical spinal pain associated with sustained rotatory deformity of the neck.

Clinical Features
Cervical spinal pain, with or without referred pain, occurring in a patient who maintains a rotated posture of the head and neck.

Diagnostic Criteria
Obvious rotated posture of the neck with or without compensatory rotation of the head.

As far as possible, the cause should be specified, but the clinical features of this condition are so distinctive that it can remain a clinical diagnosis. Neurological causes induce spasmodic torticollis and should be distinguished from muscular or articular causes.

Pathology
1. Neurological: Torticollis may be a feature of a basal ganglia disorder, either primary or drug-induced. Pain may only be a result of secondary degenerative musculoskeletal effects.
2. Muscular: Sprain of a muscle may result in the patient assuming an antalgic, rotated posture that minimizes the strain on the affected muscle. Contracture can develop not susceptible to manipulation under anesthesia.
3. Articular: One of the synovial joints of the neck may be dislocated or subluxated so as to cause the rotatory deformity, and voluntary reduction is not possible because of structural changes in the joint or because attempted reduction stresses periarticular or intraarticular structures and aggravates the patient's pain. This includes fixed atlanto-axial rotatory deformity and meniscus extrapment of a cervical zygapophysial joint.

4. Herniated nucleus pulposus: In the presence of a herniated nucleus pulposus, a patient may adopt a reflex or voluntary antalgic rotated posture of the neck to avoid the pain produced by the herniated nuclear material compromising a spinal nerve.

Relief
Torticollis due to neurologic disorder or muscle spasm may sometimes be relieved by repeated injections of the motor nerve supply with botulinum toxin.

Code

133.X0jS	Congenital
133.X1*S	Trauma
133.X2*S	Infection
133.X8fS	Unknown or other

Cervical Discogenic Pain (IX-10)

Definition
Cervical spinal pain, with or without referred pain, stemming from a cervical intervertebral disk.

Clinical Features
Spinal pain perceived in the cervical region, with or without referred pain to the head, anterior or posterior chest wall, upper limb girdle, or upper limb.

Diagnostic Criteria
The patient's pain may be shown conclusively to stem from an intervertebral disk by demonstrating

either (1) that selective anesthetization of the putatively symptomatic intervertebral disk completely relieves the patient of the accustomed pain for a period consonant with the expected duration of action of the local anesthetic used;

or (2) that selective anesthetization of the putatively symptomatic intervertebral disk substantially relieves the patient of the accustomed pain for a period consonant with the expected duration of action of the local anesthetic used, save that whatever pain persists can be ascribed to some other coexisting source or cause;

or (3) provocation diskography of the putatively symptomatic disk reproduces the patient's accustomed pain, provided that provocation of at least two adjacent intervertebral disks clearly does not reproduce the patient's pain, and provided that the pain cannot be ascribed to some other source innervated by the same segments that innervate the putatively symptomatic disk.

Pathology
Unknown, but presumably the pain arises as a result of chemical or mechanical irritation of the nerve endings in the outer anulus fibrosus, initiated by injury to the anulus, or as a result of excessive stresses imposed on the anulus by injury, deformity or other disease within the affected segment or adjacent segments.

Remarks
Provocation diskography alone is insufficient to establish conclusively a diagnosis of discogenic pain because of the propensity for false-positive responses either because of apprehension on the part of the patient or because of the coexistence of a separate source of pain within the segment under investigation. If analgesic diskography is not performed or is possibly false-negative, criterion 3 must be explicitly satisfied. Otherwise, the diagnosis of "discogenic pain" cannot be sustained, whereupon an alternative

classification must be used.

Code

133.X1vS	Trauma
133.X6bS	Degeneration
133.X7*S	Dysfunction 233.X1bR Trauma
233.X6*R	Degeneration
233.X7*R	Dysfunction

References

Cloward RB. Cervical diskography: a contribution to the aetiology and mechanism of neck, shoulder and arm pain. Ann Surg 1959;130:1052–64.

Collins HR. An evaluation of cervical and lumbar discography. Clin Orthop 1975;107:133–8.

Kikuchi S, Macnab I, Moreau P. Localisation of the level of symptomatic cervical disc degeneration. J Bone Joint Surg 1981;63B:272–7.

Roth DA. Cervical analgesic discography: a new test for the definitive diagnosis of the painful-disk syndrome. JAMA 1976;235:1713–4.

Simmons EH, Segil CM. An evaluation of discography in the localisation of symptomatic levels in discogenic disease of the spine. Clin Orthop 1975;108:57–69.

Cervical Zygapophysial Joint Pain (IX-11)

Definition

Cervical spinal pain with or without referred pain stemming from one or more of the cervical zygapophysial joints.

Clinical Features

Cervical spinal pain with or without referred pain.

Diagnostic Criteria

No criteria have been established whereby zygapophysial joint pain can be diagnosed on the basis of the patient's history or by conventional clinical examination.

The condition can be firmly diagnosed only by the use of diagnostic intraarticular zygapophysial joint blocks. For the diagnosis to be declared, all of the following criteria must be satisfied.

1. The blocks must be radiologically controlled.
2. Arthrography must demonstrate that any injection has been made selectively into the target joint, and any material that is injected into the joint must not spill over into adjacent structures that might otherwise be the actual source of the patient's pain.
3. The patient's pain must be totally relieved following the injection of local anesthetic into the target joint.
4. A single positive response to the intra-articular injection of local anesthetic is insufficient for the diagnosis to be declared. The response must be validated by an appropriate control test that excludes falsepositive responses on the part of the patient, such as:

- no relief of pain upon injection of a nonactive agent;
- no relief of pain following the injection of an active local anesthetic into a site other than the target joint; or
- a positive but differential response to local anesthetics of different durations of action injected

into the target joint on separate occasions.

Local anesthetic blockade of the nerves supplying a target zygapophysial joint may be used as a screening procedure to determine in the first instance whether a particular joint might be the source of symptoms, but the definitive diagnosis may be made only upon selective intraarticular injection of the putatively symptomatic joint.

Pathology
Still unknown. May be due to small fractures not evident on plain radiography or conventional computerized tomography, but possibly demonstrated on high-resolution CT, conventional tomography, or stereoradiography. May be due to osteoarthrosis, but the radiographic presence of osteoarthritis is not a sufficient criterion for the diagnosis to be declared. Zygapophysial joint pain may be caused by rheumatoid arthritis, ankylosing spondylitis, septic arthritis, or villo-nodular synovitis.

Sprains and other injuries to the capsule of zygapophysial joints have been demonstrated at post mortem and may be the cause of pain in some patients, but these types of injuries cannot be demonstrated in vivo using currently available imaging techniques.

Remarks
See also Cervical Segmental Dysfunction (IX- 1*5).*
Codes

133.X1pS	Trauma
133.X6cS	Degeneration
133.X7aS	Dysfunction

References

Abel MS. Occult traumatic lesions of the cervical vertebrae. CRC Crit Rev Clin Radiol Nucl Med 1975;6:469–553.

Binet EF, Moro JJ, Marangola JP, Hodge CJ. Cervical spine tomography in trauma. Spine 1977;2:163–73.

Bogduk N, Marsland A. The cervical zygapophyseal joints as a source of neck pain. Spine 1988;13:610–7.

Dwyer A, Aprill C, Bogduk N. Cervical zygapophyseal joint pain patterns I: a study in normal volunteers. Spine 1990;15:453–7.

Dory MA. Arthrography of the cervical facet joints. Radiology 1983;148:379–82.

Dussault RG, Nicolet VM. Cervical facet joint arthrography. J Can Assoc Radiol 1985;36:79–80.

Hove B, Gyldensted C. Cervical analgesic facet joint arthrography. Neuroradiology 1990;32:456–9.

McCormick CC. Arthrography of the atlanto-axial (Cl-C2) joints: technique and results J Intervent Radiol 1987;2:9–13.

Smith GR, Beckly DE, Abel MS. Articular mass fracture: a neglected cause of post traumatic neck pain? Clin Radiol 1976;27:335–40.

Wedel DJ, Wilson PR. Cervical facet arthrography. Reg Anesth 1985;10:7–11.

Woodring JH, Goldstein SJ. Fractures of the articular processes of the cervical spine. AJR Am J Roentgenol 1982;139:341–4.

Cervical Muscle Sprain (IX-12)

Definition
Cervical spinal pain stemming from a lesion in a specified muscle caused by strain of that muscle beyond its normal physiological limits.

Clinical Features

Cervical spinal pain, with or without referred pain, associated with tenderness in the affected muscle and aggravated by either passive stretching or resisted contraction of that muscle.

Diagnostic Criteria
The following criteria must all be satisfied.

1. The affected muscle is specified.
2. There is a history of activities consistent with the affected muscle having been strained.
3. The muscle is tender to palpation.
4. (a) Aggravation of the pain by any clinical test that can be shown to stress selectively the affected muscle, or
   (b) Selective infiltration of the affected muscle with local anesthetic completely relieves the patient's pain.

Pathology
Rupture of muscle fibers, usually near their myotendinous junction, that elicits an inflammatory repair response.

Remarks
This category has been included in recognition of its frequent use in clinical practice, and because a pattern of "muscle sprain" is readily diagnosed in injuries of the limbs.

Code
133.XlmS 233.Xlk

Cervical Trigger Point Syndrome (IX-13)

Definition
Cervical spinal pain stemming from a trigger point or trigger points in one or more of the muscles of the cervical spine.

Clinical Features
Cervical spinal pain, with or without referred pain, associated with a trigger point in one or more muscles of the cervical vertebral column.

Diagnostic Criteria
The following criteria must all be satisfied.

1. A trigger point must be present in a muscle, consisting of a palpable, tender, firm, fusiform nodule or band orientated in the direction of the affected muscle's fibers.
2. The muscle must be specified.
3. Palpation of the trigger point reproduces the patient's pain and/or referred pain.
4. Elimination of the trigger point relieves the patient's pain. Elimination may be achieved by stretching the affected muscle, dry needling the trigger point, or infiltrating it with local anesthetic.

Pathology
Unknown. Trigger points are believed to represent areas of contracted muscle that have failed to relax as a result of failure of calcium ions to sequestrate. Pain arises as a result of the accumulation of algogenic metabolites.

Remarks
For the diagnosis to be accorded, the diagnostic criteria for a trigger point must be fulfilled. Simple tenderness in a muscle without a palpable band does not satisfy the criteria, whereupon an alternative diagnosis should be accorded, such as muscle sprain, if the criteria for that condition are fulfilled, or spinal pain of unknown or uncertain origin.

Trigger points in different muscles of the cervical spine allegedly give rise to distinctive pain syndromes differing in the distribution of referred pain, and in some instances differing in the nature of associated features. The wisdom of enunciating each and every syndrome, muscle by muscle, is questionable; there is no point attempting to define each syndrome by its allegedly distinctive pain patterns and associated features when the critical diagnostic feature is the identification of a trigger point.

Schedule of Trigger Point Sites
IX-13.1(S)
Upper Sternocleidomastoid
Code 132.X1aS
IX-13.2(S)
Lower Sternocleidomastoid
Code 132.X1bS
IX-13.3(S)
Upper Trapezius
Code 132.XicS
IX-13.4(S)
Middle Trapezius
Code 132.X1dS
IX-13.5(S)
Lower Trapezius
Code 132.XIeS
IX-13.6(S)
Splenius Capitis
Code 132.XlfS
IX-13.7(S)
Upper Splenius Cervicis
Code 132.X1gS
IX-13.8(S)
Lower Splenius Cervicis
Code 132.XlhS
IX-13.9(S)
Semispinalis Capitis
Code 132.X1iS
IX-13.10(5)
Levator Scapulae
Code 132.X1jS

References
Simons DG. Myofascial pain syndromes: Where are we? Where are we going? Arch Phys Med Rehab 1988;69:207–12.

Travell JG, Simons DG. Myofascial Pain and Dysfunction. The Trigger Point Manual. Baltimore: Williams & Wilkins; 1983.

Alar Ligament Sprain (IX-14)

Definition
Cervical spinal pain or referred pain to the head arising from an alar ligament as a result of sprain of that ligament.

Clinical Features
Upper cervical spinal pain, suboccipital pain, and/or headache, aggravated by contralateral rotation of the atlas, associated with hypermobility of the atlas in contralateral rotation.

Diagnostic Criteria
The patient's pain must clearly be aggravated by rotation of the atlas to the side opposite that of the putatively affected ligament, and hypermobility of the atlas must be evident on functional CT scan of the joint, both features being in the context of an appropriate mechanism of injury or some other reason for the ligament to have been injured.

Pathology
Unproven. Presumably the same as for sprains in ligaments of the appendicular skeleton.

Code
132.X1*S

References
Dvorak J, Hayek J, Zehnder R. CT-functional diagnostics of the rotatory instability of the upper cervical spine, part 2: an evaluation of healthy adults and patients with suspected instability. Spine (Phila Pa 1976) 1987;12:726–31.

Cervical Segmental Dysfunction (IX-15)

Definition
Cervical spinal pain ostensibly due to excessive strains sustained by the restraining elements of a single spinal motion segment.

Clinical Features
Cervical spinal pain, with or without referred pain, that can be aggravated by selectively stressing a particular spinal segment.

Diagnostic Criteria
All the following criteria should be satisfied.
1. The affected segment must be specified.
2. The patient's pain is aggravated by clinical tests that selectively stress the affected segment.
3. Stressing adjacent segments does not reproduce the patient's pain.

Pathology
Unknown. Presumably involves excessive strain incurred during activities of daily living by structures such as the ligaments, joints, or intervertebral disk of the affected segment.

Remarks
This diagnosis is offered as a partial distinction from spinal pain of unknown origin, insofar as the source of the patient's pain can at least be narrowed to a particular offending segment. Further investigation of a patient accorded this diagnosis might result in the patient's condition being ascribed a more definitive diagnosis such as diskogenic pain or zygapophysial joint pain, but the diagnosis of segmental dysfunction could be applied if facilities for undertaking the appropriate investigations are not available, if the physician or patient does not wish to pursue such investigations, or if the pain arises from multiple sites in

the same segment.

For this diagnosis to be sustained, the clinical tests used should be able to stress selectively the segment in question and have acceptable interobserver reliability.

Code
133.X1tS
233.X1cR

Radicular Pain Attributable to a Prolapsed Cervical Disk (IX-16)

Code
203.X6aR Arm

Traumatic Avulsion of Nerve Roots (IX-17)

Code
103 .X1aS/C
203.X1cR

GROUP X: THORACIC SPINAL OR RADICULAR PAIN SYNDROMES

Thoracic Spinal or Radicular Pain Attributable to a Fracture (X-1)

Definition
Thoracic spinal pain occurring in a patient with a history of injury, in whom radiography or other imaging studies demonstrate the presence of a fracture that can reasonably be interpreted as the cause of the pain.

Clinical Features
Thoracic spinal pain with or without referred pain.

Diagnostic Features
Radiographic or other imaging evidence of a fracture of one of the osseous elements of the thoracic vertebral column.

Schedule of Fractures
X-1.1(S)(R)
Fracture of a Vertebral Body
Code 333.X1eS/C 233.X1jR
X-1.2(S)
Fracture of a Spinous Process
Code 333.X1fS
X-1.3(S)(R)
Fracture of a Transverse Process
Code 333.XIgS/C 233.XlkR
X-1.4(S)
Fracture of a Rib
Code 333.X1hS
X-1.5(S)(R)
Fracture of a Superior Articular Process
Code 333.X1tS/C 233.XIIR
X-l.6(S)(R)
Fracture of an Inferior Articular Process
Code 333.XljS/C 233.XlmR
X-1.7(S)(R)
Fracture of Lamina
Code 333.XlkS/C 233.X1nR

Thoracic Spinal or Radicular Pain Attributable to an Infection (X-2)

Definition
Thoracic spinal pain occurring in a patient with clinical and/or other features of an infection, in whom the site of infection can be specified and which can reasonably be interpreted as the source of the pain.

Clinical Features
Thoracic spinal pain with or without referred pain, associated with pyrexia or other clinical features of infection.

Diagnostic Features

A presumptive diagnosis can be made on the basis of an elevated white cell count or other serological features of infection, together with imaging evidence of the presence of a site of infection in the thoracic vertebral column or its adnexa. Absolute confirmation relies on histological and/or bacteriological confirmation using material obtained by direct or needle biopsy.

Schedule of Sites of Infection

X-2.1(S)(R)
Infection of a Vertebral Body (osteomyelitis)
Code 332.X2aS/C 232.X2iR

X-2.2(S)(R)
Septic Arthritis of a Zygapophysial Joint
Code 332.X2bS/C 232.X2jR

X-2.3(S)(R)
Septic Arthritis of a Costo-Vertebral Joint
Code 332.X2cS/C 232.X2cR

X-2.4(S)(R)
Septic Arthritis of a Costo-Transverse Joint
Code 332.X2dS/C 232.X2kR

X-2.5(S)(R)
Infection of a Paravertebral Muscle
Code 332.X2eS/C 232.X21R

X-2.6(S)(R)
Infection of an Intervertebral Disk (diskitis)
Code 332.X2fS/C 232.X2mR

X-2.7(S)(R)
Infection of a Surgical Fusion-Site
Code 332.X2gS/C 232.X2nR

X-2.8(S)(R)
Infection of the Epidural Space (epidural abscess)
Code 332.X2hS/C 232.X2oR

X-2.9(S)(R)
Infection of the Meninges (meningitis)
Code 303.X2cS/C 203.X2fR

X-2.1O(S)(R)
Acute Herpes Zoster (code only)
Code 303.X2aS/C 203.X2aR

X-2.11(S)(R)
Postherpetic Neuralgia
Code 303.X2bS/C 203.X2bR

Thoracic Spinal or Radicular Pain Attributable to a Neoplasm (X-3)

Definition

Thoracic spinal pain associated with a neoplasm that can reasonably be interpreted as the source of the pain.

Clinical Features

Thoracic spinal pain with or without referred pain.

Diagnostic Features
A presumptive diagnosis may be made on the basis of imaging evidence of a neoplasm that directly or indirectly affects one or other of the tissues innervated by thoracic spinal nerves. Absolute confirmation relies on obtaining histological evidence by direct or needle biopsy.

Schedule of Neoplastic Diseases
X-3.1(S)(R)
Primary Tumor of a Vertebral Body
Code 333.X4aS/C 233.X4vR
X-3.2(S)(R)
Primary Tumor of Any Part of a Vertebra Other than Its Body
Code 333.X4bS/C 233.X41R
X-3.3(S)(R)
Primary Tumor of a Zygapophysial Joint
Code 333.X4cS/C 233.X4mR
X-3.4(S)(R)
Primary Tumor of the Proximal End of a Rib
Code 333.X4dS/C 233.X4nR
X-3.5(S)(R)
Primary Tumor of a Paravertebral Muscle
Code 333.X4eS/C 233.X4oR
X-3.6(S)(R)
Primary Tumor of Epidural Fat (e.g., lipoma)
Code 333.X4fS/C 233.X4pR
X-3.7(S)(R)
Primary Tumor of Epidural Vessels (e.g., angioma)
Code 333.X4gS/C 233.X4qR
X-3.8(S)(R)
Primary Tumor of Meninges (e.g., meningioma)
Code 303.X4aS/C 203.X4dR
X-3.9(S)(R)
Primary Tumor of Spinal Nerves (e.g., neurofibroma, schwannoma, neuroblastoma)
Code 303.X4bS/C 203.X4eR
X-3.10(S)(R)
Primary Tumor of Spinal Cord (e.g., glioma, etc.)
Code 303.X4cS/C 203.X4fR
X-3.11(S)(R)
Metastatic Tumor Affecting a Vertebra
Code 333.X4hS/C 233.X4hR
X-3.12(S)(R)
Metastatic Tumor Affecting the Vertebral Canal
Code 333.X4iS/C 233.X4iR
X-3.13(S)(R)
Other Infiltrating Neoplastic Disease of a Vertebra (e.g., lymphoma)
Code 333.X4jS/C 233.X4jR

Thoracic Spinal or Radicular Pain Attributable to Metabolic Bone Disease (X-4)

Definition
Thoracic spinal pain associated with a metabolic bone disease that can reasonably be interpreted as the source of the pain.

Clinical Features
Thoracic spinal pain with or without referred pain.

Diagnostic Features
Imaging or other evidence of metabolic bone disease affecting the thoracic vertebral column, confirmed by appropriate serological or biochemical investigations and/or histological evidence obtained by needle or other biopsy.

Schedule of Metabolic Bone Diseases

X-4.1(S)(R)
Osteoporosis of Age
Code 332.X5aS/C 232.X5gR

X-4.2(S)(R)
Osteoporosis of Unknown Cause
Code 332.X5bS/C 232.X5hR

X-4.3(S)(R)
Osteoporosis of Some Known Cause Other than Age
Code 332.X5cS/C 232.X5iR

X-4.4(S)(R)
Hyperparathyroidism
Code 332.X5dS/C 232.X5jR

X-4.5(S)(R)
Paget's Disease of Bone
Code 332.X5eS/C 232.X5kR

X-4.6(S)(R)
Metabolic Disease of Bone Not Otherwise Classified
Code 332.X5fS/C 232.X51R

Thoracic Spinal or Radicular Pain Attributable to Arthritis (X-5)

Definition
Thoracic spinal pain associated with arthritis that can reasonably be interpreted as the source of the pain.

Clinical Features
Thoracic spinal pain with or without referred pain.

Diagnostic Features
Imaging or other evidence of arthritis affecting the joints of the thoracic vertebral column.

Schedule of Arthritides

X-5.1 Rheumatoid Arthritis
Code 334.X3aS/C 234.X3aR

X-5.2 Ankylosing Spondylitis
Code 332.X8aS/C

X-5.3 Osteoarthritis
Code 338.X6*S/C 238.X6bR

X-5.4 Seronegative Spondylarthropathy Not Otherwise Classified
Code 323.X8*S/C 223.X8*R

Remarks
Osteoarthritis is included in this schedule with some hesitation because there is only a weak relation between pain and this condition as diagnosed radiologically.

The alternative classification to "thoracic pain due to osteoarthrosis" should be "thoracic zygapophysial joint pain" if the criteria for this diagnosis are satisfied (see X10), or "thoracic spinal pain of unknown or uncertain origin" (see X-8).

Similarly, the condition of "spondylosis" is omitted from this schedule because there is no positive correlation between the radiographic presence of this condition and the presence of spinal pain.

Thoracic Spinal or Radicular Pain Associated with a Congenital Vertebral Anomaly (X-6)

Definition
Thoracic spinal pain associated with a congenital vertebral anomaly.

Clinical Features
Thoracic spinal pain with or without referred pain.

Diagnostic Features
Imaging evidence of a congenital vertebral anomaly affecting the thoracic vertebral column.

Remarks
There is no evidence that congenital anomalies per se cause pain. Although they may be associated with pain, the specificity of this association is unknown. This classification should be used only when the cause of pain cannot be otherwise specified and there is a perceived need to highlight the presence of the congenital anomaly, but should not be used to imply that the congenital anomaly is the actual source of pain.

Code
323.X0*S/C
223.XOaR

Pain Referred from Thoracic Viscera or Vessels and Perceived as Thoracic Spinal Pain (X-7)

Definition
Thoracic spinal pain associated with disease of a thoracic viscus or vessel that reasonably can be interpreted as the source of pain.

Clinical Features
Thoracic spinal pain with or without referred pain, together with features of the disease affecting the viscus or vessel concerned.

Diagnostic Features
Imaging or other evidence of the primary disease affecting a thoracic viscus or vessel.

Schedule of Diseases
X-7.1 Pericarditis
Code 323.X2 (known infection);
Code 323.X3 (unknown infective cause);
Code 323.X1 (trauma);
Code 323.X4 (neoplasm);
Code 323.X5 (toxic)
X-7.2 Aneurysm of the Aorta
Code 322.X6
X-7.3 Carcinoma of the Esophagus
Code 353.X4

Thoracic Spinal Pain of Unknown or Uncertain Origin (X-8)

Definition
Thoracic spinal pain occurring in a patient whose clinical features and associated features do not enable the cause and source of the pain to be determined, and in whom the cause or source of the pain cannot be or has not been determined by special investigations.

Clinical Features
Thoracic spinal pain with or without referred pain.

Diagnostic Features
Thoracic spinal pain for which no other cause has been found or can be attributed.

Pathology
Unspecified.

Remarks
This definition is intended to cover those complaints that for whatever reason currently defy conventional diagnosis. It does not encompass pain of psychological origin. It presupposes an organic basis for the pain, but one that cannot be or has not been established reliably by clinical examination or special investigations such as imaging techniques or diagnostic blocks.

This diagnosis may be used as a temporary diagnosis. Patients given this diagnosis could in due course be accorded a more definitive diagnosis once appropriate diagnostic techniques are devised or applied. In some instances, a more definitive diagnosis might be attainable using currently available techniques, but for logistic or ethical reasons these may not have been applied.

Upper Thoracic Spinal Pain of Unknown or Uncertain Origin (X-8.1)

Definition
As for X-8, but the pain is located in the upper thoracic region.

Clinical Features
Spinal pain located on the upper thoracic region.

Diagnostic Criteria
As for X-8, save that the pain is located in the upper thoracic region.

Pathology
As for X-8.

Remarks
As for X-8.

Code
3XX.X8bS/C
2XX.X8fR

Midthoracic Spinal Pain of Un-known or Uncertain Origin (X-8.2)

Definition
As for X-8, but the pain is located in the middle thoracic region.

Clinical Features
Spinal pain located on the midthoracic region.

Diagnostic Criteria
As for X-8, save that the pain is located in the midthoracic region.

Pathology
As for X-8.

Remarks As for X-8.

Code
3XX.X8cS/C
2XX.X8gR

Lower Thoracic Spinal Pain of Unknown or Uncertain Origin (X-8.3)

Definition
As for X-8, but the pain is located in the lower thoracic region.

Clinical Features
Spinal pain located on the lower thoracic region.

Diagnostic Criteria
As for X-8, save that the pain is located in the lower thoracic region.

Pathology
As for X-8.

Remarks
As for X-8.

Code
3XX.X8dS/C
2XX.X8hR

Thoracolumbar Spinal Pain of Unknown or Uncertain Origin (X-8.4)

Definition
As for X-8, but the pain is located in the thoracolumbar region.

Clinical Features
Spinal pain located on the thoracolumbar region.

Diagnostic Criteria
As for X-8, save that the pain is located in the thoracolumbar region.

Pathology
As for X-8.

Remarks
As for X-8.

Code
3XX.X8eS/C
2XX.X81R

Thoracic Discogenic Pain (X-9)

Definition
Thoracic spinal pain, with or without referred pain, stemming from a thoracic intervertebral disk.

Clinical Features
Spinal pain perceived in the thoracic region, with or without referred pain.

Diagnostic Criteria
The patient's pain must be shown conclusively to stem from an intervertebral disk by demonstrating

either (1) that selective anesthetization of the putatively symptomatic intervertebral disk completely relieves the patient of the accustomed pain for a period consonant with the expected duration of action of the local anesthetic used;

or (2) that selective anesthetization of the putatively symptomatic intervertebral disk substantially relieves the patient of the accustomed pain for a period consonant with the expected duration of action of the local anesthetic used, save that whatever pain persists can be ascribed to some other coexisting source or cause;

or (3) that provocation diskography of the putatively symptomatic disk reproduces the patient's accustomed pain, provided that provocation of at least two adjacent intervertebral disks clearly does not reproduce the patient's pain, and provided that the pain cannot be ascribed to some other source innervated by the same segments that innervate the putatively symptomatic disk.

Pathology
Unknown, but presumably the pain arises as a result of chemical or mechanical irritation of the nerve endings in the outer anulus fibrosus, initiated by injury to the anu-Page 116
lus, or as a result of excessive stresses imposed on the anulus by injury, deformity, or other disease within the affected segment or adjacent segments.

Remarks
Provocation diskography alone is insufficient to establish conclusively a diagnosis of discogenic pain because of the propensity for false-positive responses, either because of apprehension on the part of the patient or because of the coexistence of a separate source of pain within the segment under investigation. If analgesic diskography is not performed or is possibly false-negative, criterion 3 must be explicitly satisfied. Otherwise, the diagnosis of "discogenic pain" cannot be sustained, whereupon an alternative classification must be used.

Thoracic diskography is particularly hazardous because of the risk of pneumothorax. No publications have formally described this procedure or experience with it. Until its safety and clinical utility have been established, thoracic diskography should be restricted to centers capable of dealing with potential complications and prepared to determine its utility by way of formal study.

Code

333.X11S	Trauma
333.X6aS	Degeneration
333.X7cS	Dysfunctional

Thoracic Zygapophysial Joint Pain (X-10)

Definition
Thoracic spinal pain, with or without referred pain, stemming from one or more of the thoracic zygapophysial joints.

Clinical Features
Thoracic spinal pain with or without referred pain.

Diagnostic Criteria
No criteria have been established whereby zygapophysial joint pain can be diagnosed on the basis of the patient's history or by conventional clinical examination.

The condition can be diagnosed only by the use of diagnostic intraarticular zygapophysial joint blocks. For the diagnosis to be declared, all of the following criteria must be satisfied.

1. The blocks must be radiologically controlled.
2. Arthrography must demonstrate that any injection has been made selectively into the target joint, and any material that is injected into the joint must not spill over into adjacent structures that might otherwise be the actual source of the patient's pain.

3. The patient's pain must be totally relieved following the injection of local anesthetic into the target joint.
4. A single positive response to the intraarticular injection of local anesthetic is insufficient for the diagnosis to be declared. The response must be validated by an appropriate control test that excludes false-positive responses on the part of the patient, such as:
    - no relief of pain upon injection of a nonactive agent;
    - no relief of pain following the injection of an active local anesthetic into a site other than the target joint; or
    - a positive but differential response to local anesthetics of different durations of action injected into the target joint on separate occasions.

Local anesthetic blockade of the nerves supplying a target zygapophysial joint may be used as a screening procedure to determine in the first instance whether a particular joint might be the source of symptoms, but the definitive diagnosis may be made only upon selective intraarticular injection of the putatively symptomatic joint.

Pathology
Unknown and unstudied.

Remarks
See also Thoracic Segmental Dysfunction (X-15).

Code

333.X1mS/C	Trauma
333.X6bS/C	Degeneration
333.X7tS/C	Dysfunctional

Reference
Wilson PR. Thoracic facet syndrome: a clinical entity? Pain 1987;Suppl 4:S87.

Costo-Transverse Joint Pain (X-11)

Definition
Thoracic spinal pain, with or without referred pain, stemming from one or more of the costo-transverse joints.

Clinical Features
Thoracic spinal pain, with or without referred pain, aggravated by selectively stressing a costo-transverse joint.

Diagnostic Criteria
No criteria have been established whereby costotransverse joint pain can be diagnosed on the basis of the patient's history or by conventional clinical examination. Stressing the putatively symptomatic joint by selectively gliding the related rib ventrad, cephalad, or caudad constitutes presumptive evidence that the joint may be symptomatic.

The condition can be firmly diagnosed only by the use of diagnostic local anesthetic blocks of the putatively symptomatic joint. For the diagnosis to be firmly sustained, all of the following criteria must be

satisfied.

If intraarticular blocks are used,

1. The blocks must be radiologically controlled.
2. Arthrography must demonstrate that any injection has been made selectively into the target joint, and any material that is injected into the joint must not spill over into adjacent structures that might otherwise be the actual source of the patient's pain.
3. The patient's pain must be totally relieved following the injection of local anesthetic into the target joint.
4. A single positive response to the intraarticular injection of local anesthetic is insufficient for the diagnosis to be declared. The response must be validated by an appropriate control test that excludes false-positive responses on the part of the patient, such as:
    - no relief of pain upon injection of a nonactive agent;
    - no relief of pain following the injection of an active local anesthetic into a site other than the target joint; or
    - a positive but differential response to local anesthetics of different durations of action injected into the target joint on separate occasions.

If periarticular blocks are used, an injection of contrast medium of a volume identical to that of the volume of local anesthetic used must show that the dispersal of injectate does not embrace structures that might constitute alternative sources of the patient's pain. Otherwise criteria 3 and 4 for intraarticular blocks must apply.

Pathology
Unknown and unstudied.

Code

333.X1nS	Trauma
333.X6cS	Degeneration
333.X7eS	Dysfunctional

Thoracic Muscle Sprain (X-12)

Definition
Thoracic spinal pain stemming from a lesion in a specified muscle caused by strain of that muscle beyond its normal physiological limits.

Clinical Features
Thoracic spinal pain, with or without referred pain, associated with tenderness in the affected muscle and aggravated by either passive stretching or resisted contraction of that muscle.

Diagnostic Criteria
The following criteria must all be satisfied.

1. The affected muscle must be specified.
2. There is a history of activities consistent with the affected muscle having been strained.
3. The muscle is tender to palpation.
4. a) Aggravation of the pain by any clinical test that can be shown to selectively stress the affected muscle, or
   b) Selective infiltration of the affected muscle with local anesthetic completely relieves the patient's pain.

Pathology
Rupture of muscle fibers, usually near their myotendinous junction, that elicits an inflammatory repair response.

Code

333.X1oS	Trauma
333.X7fS	Dysfunctional

Thoracic Trigger Point Syndrome (X-13)

Definition
Thoracic spinal pain stemming from a trigger point or trigger points in one or more of the muscles of the thoracic spine.

Clinical Features
Thoracic spinal pain, with or without referred pain, associated with a trigger point in one or more muscles of the vertebral column.

Diagnostic Criteria
The following criteria must all be satisfied.

1. A trigger point must be present in a muscle, consisting of a palpable, tender, firm, fusiform nodule or band orientated in the direction of the affected muscle's fibers.
2. The muscle must be specified.
3. Palpation of the trigger point reproduces the patient's pain and/or referred pain.
4. Elimination of the trigger point relieves the patient's pain. Elimination may be achieved by stretching the affected muscle, dry needling the trigger point, or infiltrating it with local anesthetic.

Pathology
Unknown. Trigger points are believed to represent areas of contracted muscle that have failed to relax as a result of failure of calcium ions to sequestrate. Pain arises as a result of the accumulation of algogenic metabolites.

Remarks
For the diagnosis to be accorded, the diagnostic criteria for a trigger point must be fulfilled. Simple tenderness in a muscle without a palpable band does not satisfy the criteria, whereupon an alternative diagnosis should be accorded, such as muscle sprain, if the criteria for that condition are fulfilled, or spinal pain of unknown or uncertain origin.

Code

332.XlaS	Trauma
332.X6aS	Degeneration
332.X7hS	Dysfunctional

References
Simons DG. Myofascial pain syndromes: Where are we? Where are we going? Arch Phys Med Rehab 1988;69:207–12.

Travell JG, Simons DG. Myofascial Pain and Dysfunction. The Trigger Point Manual. Balitmore: Williams & Wilkins; 1983.

Thoracic Muscle Spasm (X-14)

Definition
Thoracic spinal pain resulting from sustained or repeated involuntary activity of the thoracic spinal muscles.

Clinical Features
Thoracic spinal pain for which there is no other underlying cause, associated with demonstrable sustained muscle activity.

Diagnostic Features
None.

Pathology
Unknown. Presumably sustained muscle activity prevents adequate wash-out of algogenic chemicals produced by the sustained metabolic activity of the muscle.

Remarks
While there are beliefs in a pain-muscle spasm-pain cycle, clinical tests or conventional electromyography have not been shown to demonstrate reliably the presence of sustained muscle activity in such situations. The strongest evidence for repeated involuntary muscle spasm stems from sleep-EMG studies conducted on patients with low-back pain, but although it is associated with back pain, a causal relationship between this type of muscle activity and back pain has not been established.

Code
332.X1bS Trauma
332.X2iS Infection
332.X4*S Neoplasm
332.X6bS Degenerative
332.X7iS Dysfunctional
332.X8fS Unknown

References
Fischer AA, Chang CH. Electromyographic evidence of paraspinal muscle spasm during sleep in patients with low back pain. Clin J Pain 1985;1:147–54.

Garrett W, Anderson G, Richardson W, et al. Muscle: future directions. In: Frymoyer JW, Gordon SL; American Academy of Orthopaedic Surgeons; National Institute of Arthritis and Musculoskeletal and Skin Diseases (U.S.); North American Spine Society, editors. New Perspectives on Low Back Pain: workshop, Airlie, Virginia, May 1988. Park Ridge, IL: The Academy; 1989. p. 373–9.

Garrett W, Bradley W, Byrd S, Edgerton VR, Gollnick P. Muscle: basic science perspectives. In: Frymoyer JW, Gordon SL; American Academy of Orthopaedic Surgeons; National Institute of Arthritis and Musculoskeletal and Skin Diseases (U.S.); North American Spine Society, editors. New Perspectives on Low Back Pain: workshop, Airlie, Virginia, May 1988. Park Ridge, IL: The Academy; 1989. p. 335–72.

Roland MO. A critical review of the evidence for a painspasm-pain cycle in spinal disorders. Clin Biomech 1986;1:102–9.

Thoracic Segmental Dysfunction (X-15)

Definition

Thoracic spinal pain ostensibly due to excessive strains imposed on the restraining elements of a single spinal motion segment.

Clinical Features
Thoracic spinal pain, with or without referred pain, that can be aggravated by selectively stressing a particular spinal segment.

Diagnostic Criteria
All the following criteria should be satisfied.

1. The affected segment must be specified.
2. The patient's pain is aggravated by clinical tests that selectively stress the affected segment.
3. Stressing adjacent segments does not reproduce the patient's pain.

Pathology
Unknown. Presumably involves excessive strain imposed by activities of daily living on structures such as the ligaments, joints, or intervertebral disk of the affected segment.

Remarks
This diagnosis is offered as a partial distinction from spinal pain of unknown origin, insofar as the source of the patient's pain can at least be narrowed to a particular offending segment. Further investigation of a patient accorded this diagnosis might result in the patient's condition being ascribed a more definitive diagnosis such as discogenic pain or zygapophysial joint pain, but the diagnosis of segmental dysfunction could be applied if facilities for undertaking the appropriate investigations are not available, if the physician or patient does not wish to pursue such investigations, or if the pain arises from multiple sites in the same segment.

For this diagnosis to be sustained it is critical that the clinical tests used be shown to be able to stress selectively the segment in question and to have acceptable interobserver reliability.

Code

333.X1pS/C	Trauma
333.X7dS/C	Dysfunctional

Radicular Pain Attributable to a Prolapsed Thoracic Disk (X-16)

Code

303.X1aR	Trauma
303.X6bR	Degenerative
203.XlcR	Trauma 203.X6bR (arm) Degenerative