joint or sacroiliac joint pain or disc herniation: (evidence – Level II for caudal and lumbar interlaminar with moderate to strong recommendation)
- Moderate to severe pain causing functional disability.
- Lumbar interlaminar may be performed in post-surgery syndrome only if the access to the epidural space is obtained outside the scar (caudal and transforaminal are preferred modalities).
- Acute proven disc herniation with radiculitis with disabling pain or to avoid surgical intervention, herpes zoster, post herpetic neuralgia, CRPS I and II, epidural injections may be performed at physician discretion without above requirements.

12.6.2 Cervical Epidural

While cervical epidural injections may be administered either by the interlaminar or transforaminal approach, only the interlaminar approach has been studied with appropriate indications and effectiveness. Further, cervical transforaminal epidural injections are associated with high risk. Common indications for cervical interlaminar epidurals are as follows:|

- Chronic neck and/or upper extremity pain of at least 3 months duration which has failed to respond or poorly responded to noninterventional and nonsurgical conservative management resulting from:
  - Disc herniation/cervical radiculitis (evidence – Level I with strong recommendation)
  - Cervical spinal stenosis (evidence – Level II with moderate to strong recommendation)
  - Post cervical surgery syndrome (evidence – Level II to I with moderate to strong recommendation)
  - Axial or discogenic pain without facet joint pathology or disc herniation (evidence – Level II with moderate to strong recommendation)
- Intermittent or continuous pain causing functional disability.
- Acute proven disc herniation with radiculitis with disabling pain or to avoid surgical intervention, herpes zoster, post herpetic neuralgia, CRPS I and II, epidural injections may be performed at physician discretion without above requirements.

12.6.3 Thoracic Epidural

Thoracic epidural injections may be performed either with an interlaminar approach or a transforaminal approach. The literature is scant in reference to thoracic epidural injections, with Level II evidence. Consequently, only interlaminar epidural injections are described herewith. Common indications are as follows:

- Chronic mid back or upper back pain of at least 3 months duration which has failed to respond or poorly responded to noninterventional and nonsurgical conservative management resulting from:
  - Thoracic disc herniation/radiculitis
  - Thoracic spinal stenosis
  - Thoracic post-surgery syndrome
  - Axial or discogenic pain without facet joint pathology or disc herniation
  - Moderate to severe pain causing functional disability.
- Acute proven disc herniation with radiculitis with disabling pain or to avoid surgical intervention, herpes zoster, post herpetic neuralgia, CRPS I and II, epidural injections may be performed at physician discretion without above requirements.

12.7 Frequency of Epidural Procedures

- Guidelines of frequency of interventions apply to epidural injections caudal, interlaminar, and transforaminal.
- In the diagnostic phase, a patient may receive 2 procedures at intervals of no sooner than 2 weeks, preferably 4-6 weeks based on the type and dosage of steroid used.
- In the therapeutic phase (after the diagnostic phase is completed), the suggested frequency of interventional techniques should be 2½ to 3 months or longer between each injection, provided that > 50% relief is obtained for 2½ to 3 months, not exceeding 4 per year, per region.
- If neural blockade is applied for different regions, they may be performed at intervals of no sooner than one week and preferably 2 weeks for most types of procedures. The therapeutic frequency may remain at intervals of at least 2 months for each region. It is further suggested that all regions be treated at the same time, provided all procedures can be performed safely.
- In the treatment or therapeutic phase, the epidural injections should be repeated only as necessary according to medical necessity criteria, and it is suggested that these be limited to a maximum of 4 times per year.
- Cervical and thoracic regions are considered as one region and lumbar and sacral are considered as one region.

12.8 Percutaneous Adhesiolysis

At the present time, the evidence is available for

percutaneous adhesiolysis in the lumbar region only utilizing a caudal approach. Evidence for the cervical and thoracic regions and transforaminal approach in the lumbar region is only emerging. Common indications for percutaneous adhesiolysis with a caudal approach in lumbar region are as follows:

- Chronic low back and/or lower extremity pain of at least 6 months duration which failed to respond to or poorly responded to noninterventional and nonsurgical conservative management and fluoroscopically directed epidural injections secondary to:
  - Post-surgery syndrome (evidence – Level I with strong recommendation).
  - Central spinal stenosis (evidence – Level II with moderate to strong recommendation)
  - Disc herniation/radiculitis/severe degenerative disc disease (evidence – Level II with moderate to strong recommendation)
- Intermittent or continuous pain causing functional disability.

12.8.1 Frequency of Interventions

- The number of procedures is preferably limited to:
  - 2 interventions per year, with a 3-day protocol
  - 4 interventions per year, with a one-day protocol.

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