Intervention in Pain Medicine ABRIDGED

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NHS Trust

МОЗ України

Національна медична академія післядипломної освіти ім. П.Л. Шупика

Клінічна лікарня Феофанія

Асоціація анестезіологів України

Польське товариство вивчення болю

Асоціація анестезіологів Великої Британії та Ірландії

Британське Королівське медичне товариство

Лондонський медичний університет

Міжнародна мережа фахівців з болю

Центр лікування болю та нейромодуляції Лікарня Guy's and St.Thomas

Міжнародна асоціація з вивчення болю

This talk is not about

- Neurodestructive palliative procedures in chronic and cancer pain. - Prof. Y. Lisetskij
- Neurolytic nerve blocks in cancer pain -Prof. P N Jain
- … invasive treatment of trigeminal neuralgia.-Dr Anna Przeklasa-Muszynska

-Neuromodulation techniques Dr T. Goroszeniuk

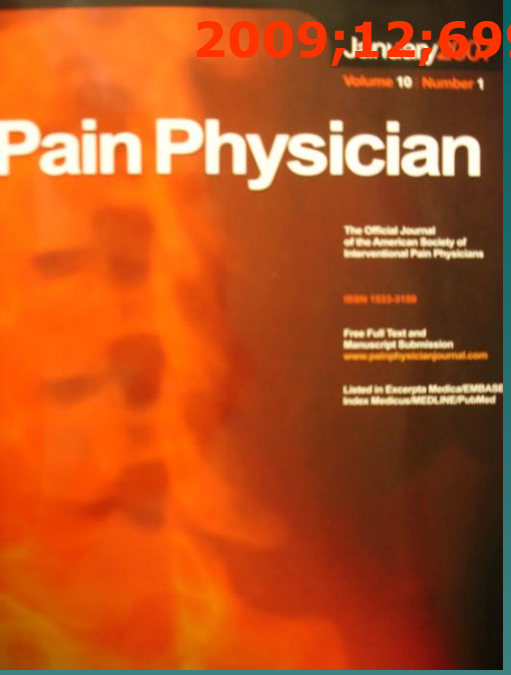
-Intrathecal drug delivery Dr J. Azzopardi

It will just mention EBM(Evidence Based Medicine)

- **US Preventive Services Task Force**
- Systems to stratify evidence by quality have been developed, such as this one by the U.S. Preventive Services Task Force for ranking evidence about the effectiveness of treatments or screening:
- Level I: Evidence obtained from at least one properly designed randomized controlled trial.
- Level II-1: Evidence obtained from well-designed controlled trials without randomization.
- Level II-2: Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.
- Level II-3: Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled trials might also be regarded as this type of evidence.
- Level III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees

- **National Health Service**

- Level A: Consistent Randomised Controlled Clinical Trial, cohort study, all or none (see note below), clinical decision rule validated in different populations.
- Level B: Consistent Retrospective Cohort, Exploratory Cohort, Ecological Study, Outcomes Research, case-control study; or extrapolations from level A studies.
- Level C: Case-series study or extrapolations from level B studies.
- Level D: Expert opinion without explicit critical appraisal, or based on physiology, bench research or first principles



2009;12:699-802

. Comprehensive Evidence-Based Guidelines for Interventional Techniques in the Management of Chronic Spinal Pain

ASIPP – IPM Guidelines

Laxmaiah Manchikanti, MD, Mark V. Boswell, MD, PhD, Vijay Singh, MD, Ramsin M. Benyamin, MD, Bert Fellows, MA, Salahadin Abdi, MD, PhD, Ricardo M. Buenaventura, MD, Ann Conn, MD, Sukdeb Datta, MD, Richard Derby, MD, Frank J.E. Falco, MD, Stephanie Erhart, MS, Sudhir Diwan, MD, Salim M. Hayek, MD, PhD, Standiford Helm, MD, Allan T. Parr, MD, David M. Schultz, MD, Howard S. Smith, MD, Lee R. Wolfer, MD, MS, and Joshua A. Hirsch, MD

BACKGROUND: Comprehensive, evidence-based guidelines for interventional techniques in the management of chronic spinal pain are described here to provide recommendations for clinicians.

OBJECTIVE: To develop evidence-based clinical practice guidelines for interventional techniques in the diagnosis and treatment of chronic spinal pain.

DESIGN: Systematic assessment of the literature.

METHODS: Strength of evidence was assessed by the U.S. Preventive Services Task Force (USPSTF) criteria utilizing 5 levels of evidence ranging from Level I to III with 3 subcategories in Level II.

OUTCOMES: Short-term pain relief was defined as relief lasting at least 6 months and long-term relief was defined as longer than 6 months, except for intradiscal therapies, mechanical disc decompression, spinal cord stimulation and intrathecal infusion systems, wherein up to one year relief was considered as short-term.

RESULTS: The indicated evidence for accuracy of diagnostic facet joint nerve blocks is Level I or II-1 in the diagnosis of lumbar, thoracic, and cervical facet joint pain. The evidence for lumbar and cervical provocation discography and sacroiliac joint injections is Level II-2, whereas it is Level II-3 for thoracic provocation discography.

The indicated evidence for therapeutic interventions is Level I for caudal epidural steroid injections in managing disc herniation or radiculitis, and discogenic pain without disc herniation or radiculitis. The evidence is Level I or II-1 for percutaneous adhesiolysis in management of pain secondary to post-lumbar

The quality of evidence to support a clinical decision is a combination of the quality of research data and the clinical 'directness' of the data

Anesthesiology 2010; 112:810–33

Practice Guidelines for Chronic Pain Management

*An Updated Report by the American Society of Anesthesiologists Task Force on Chronic Pain Management and the American Society of Regional Anesthesia and Pain Medicine**

PRACTICE Guidelines are systematically developed recommendations that assist the practitioner and patient in making decisions about health care. These recommendations may be adopted, modified, or rejected according to clinical needs and constraints and are not intended to replace local institutional policies. In addition, Practice Guidelines developed by the American Society of Anesthesiologists (ASA) are not intended as standards or absolute requirements, and their use cannot guarantee any specific outcome. Practice Guidelines are subject to revision as warranted by the evolution of medical knowledge, technology, and practice. They provide basic recommendations that are supported by synthesis and analysis of the current literature, expert and practitioner opinion, open forum commentary, and clinical feasibility data.

This document updates the "Practice Guidelines for

Methodology

A. Definition of Chronic Pain

For these Guidelines, chronic pain is defined as pain of any etiology not directly related to neoplastic involvement, associated with a chronic medical condition or extending in duration beyond the expected temporal boundary of tissue injury and normal healing, and adversely affecting the function or well-being of the individual.

B. Purposes of the Guidelines

The purposes of these Guidelines are to (1) optimize pain control, recognizing that a pain-free state may not be attainable; (2) enhance functional abilities and physical and psychologic well-being; (3) enhance the quality of life of pa-

Interventional Diagnostic Procedures

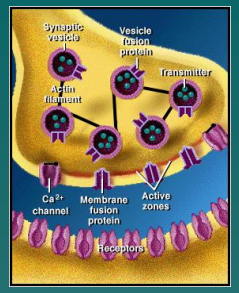
- Should be a part of patient's evaluation based on clinical presentation
- Facet joint or medial branch block
- SI joint
- SNRB
- Sympathetic block –to support the diagnosis
  - not to be used to predict outcome of chemical, radiofrequency or surgical sympathectomy
- Provocative discography – for selected patients not a routine evaluation
- Peripheral nerve blocks
  - Peripheral somatic nerve blocks should not be used for long term treatment of chronic pain

Acupuncture

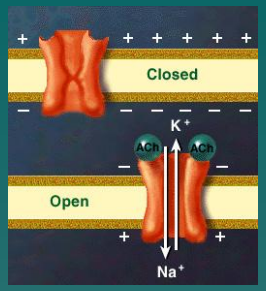
- May be considered as adjuvant to conventional therapy(drugs , physical therapy, exercise) in the treatment of nonspecific, noninflammatory low back pain

Trigger Point Injection

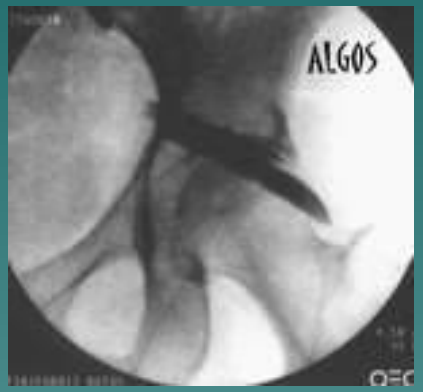
- May be considered for treatment of myofascial pain as part of a multimodal approach to pain management

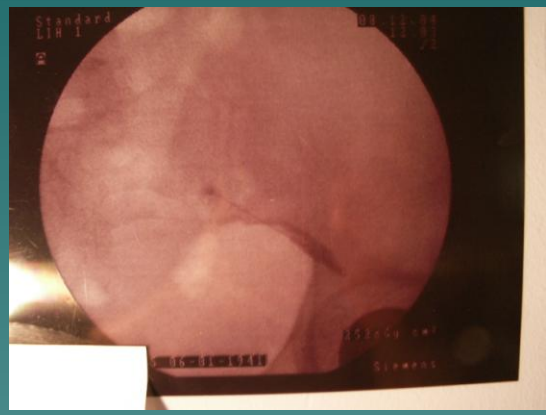


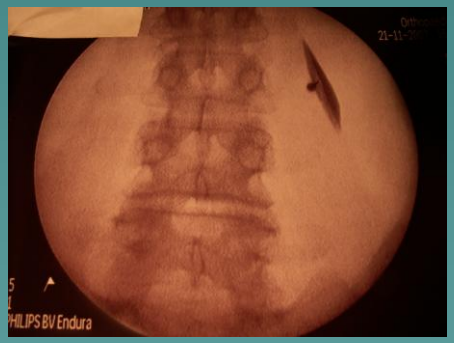
Botulinum Toxin



- Should not be used in the routine care of patients with myofascial pain
- May be used as an adjunct for the treatment of piriformis syndrome

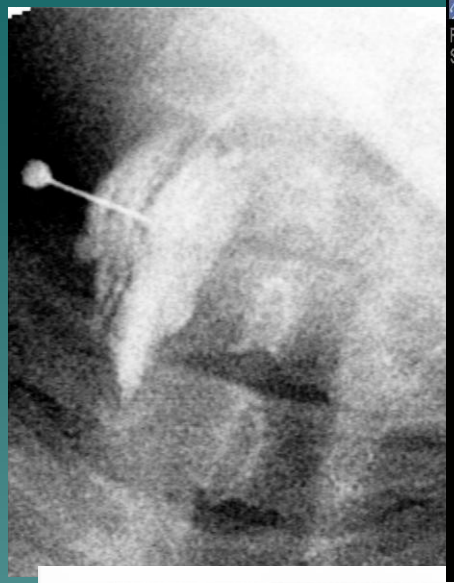


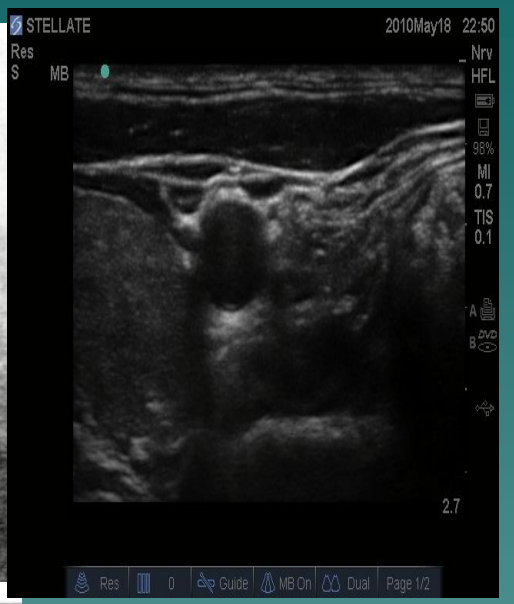


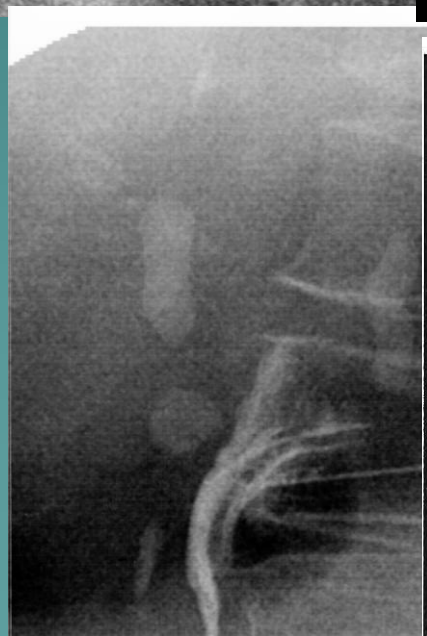


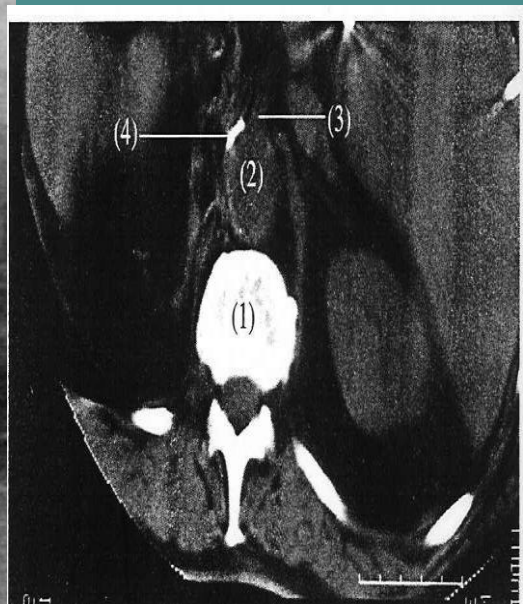
Sympathetic Blocks

- Lumbar sympathetic blocks or stellate ganglion blocks may be used for the multimodal treatment of CRPS but should not be used for the long term treatment of non CRPS neuropathic pain
- Coeliac Plexus Block may be used for treatment of pain secondary to Chronic Pancreatitis





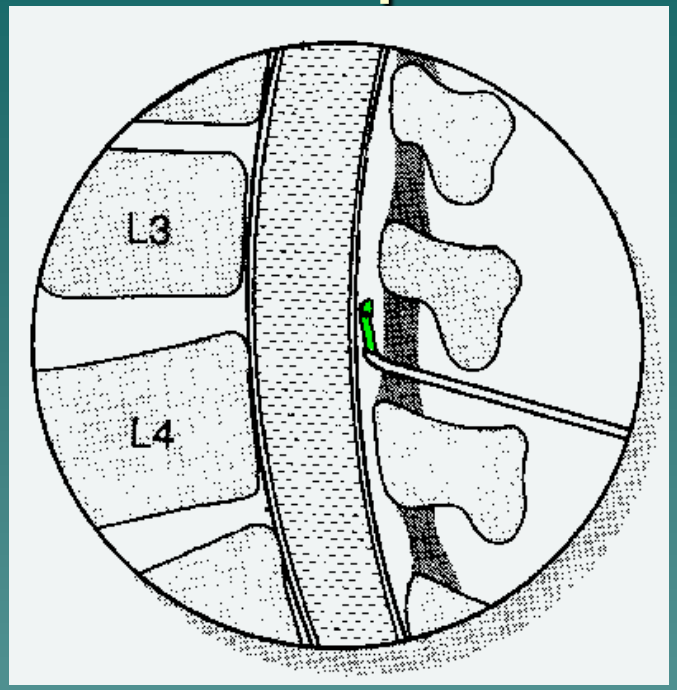


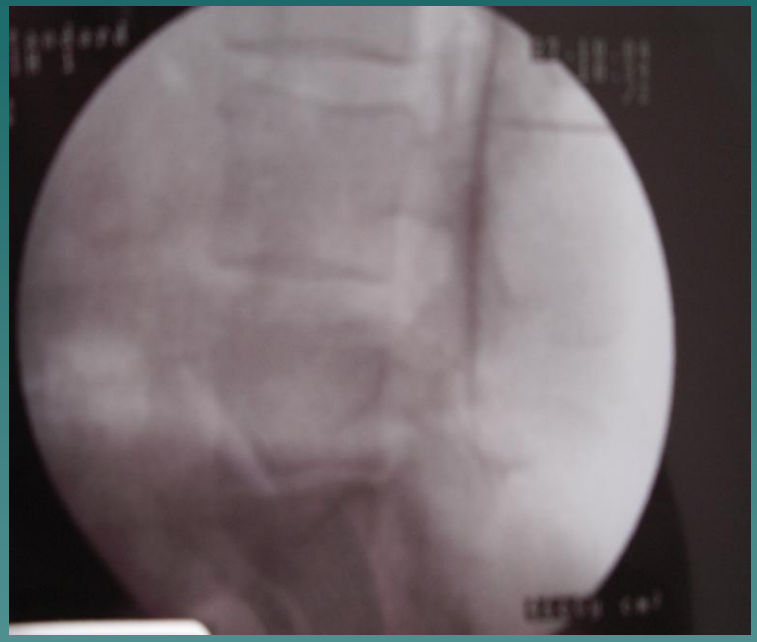


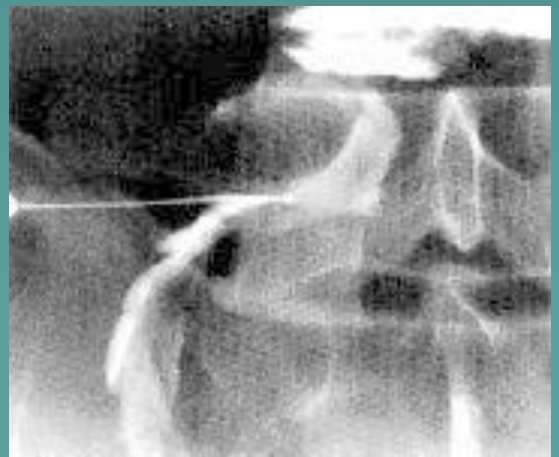
Epidural Steroids

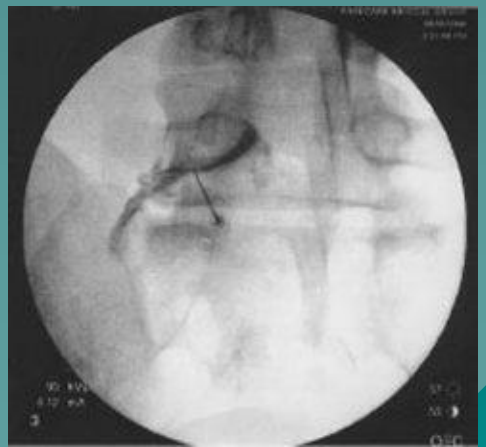
- May be used as part of multiomodal treatment regimen to provide pain relief in selected patients with radicular pain , radiculopathy
- The evidence is Level II-1 for interlaminar epidural injections and lumbar transforaminal epidural injections
- Image guidance shoud be used for both interlaminar and transforaminal epidural injections

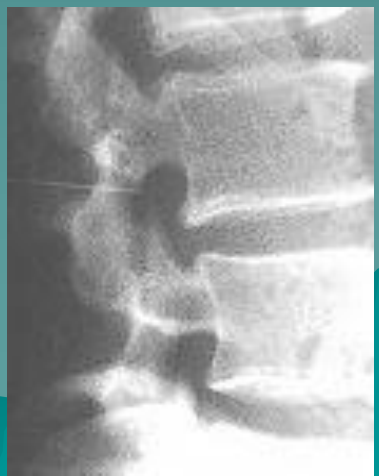
Epidural Steroids





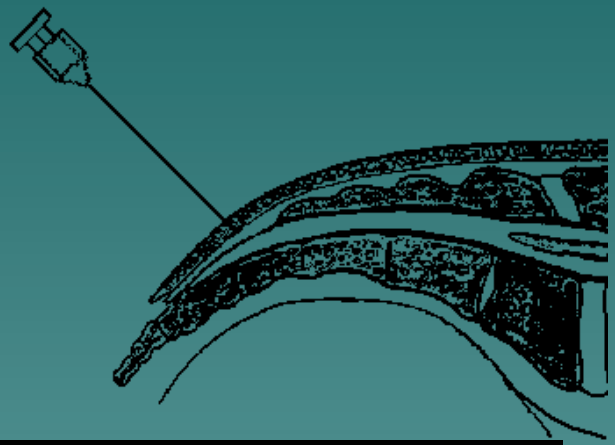


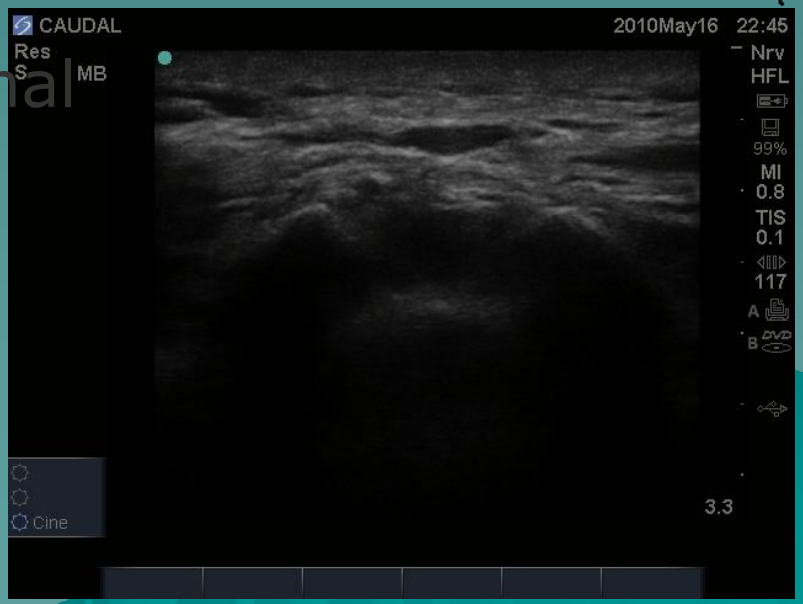




Caudal epidural

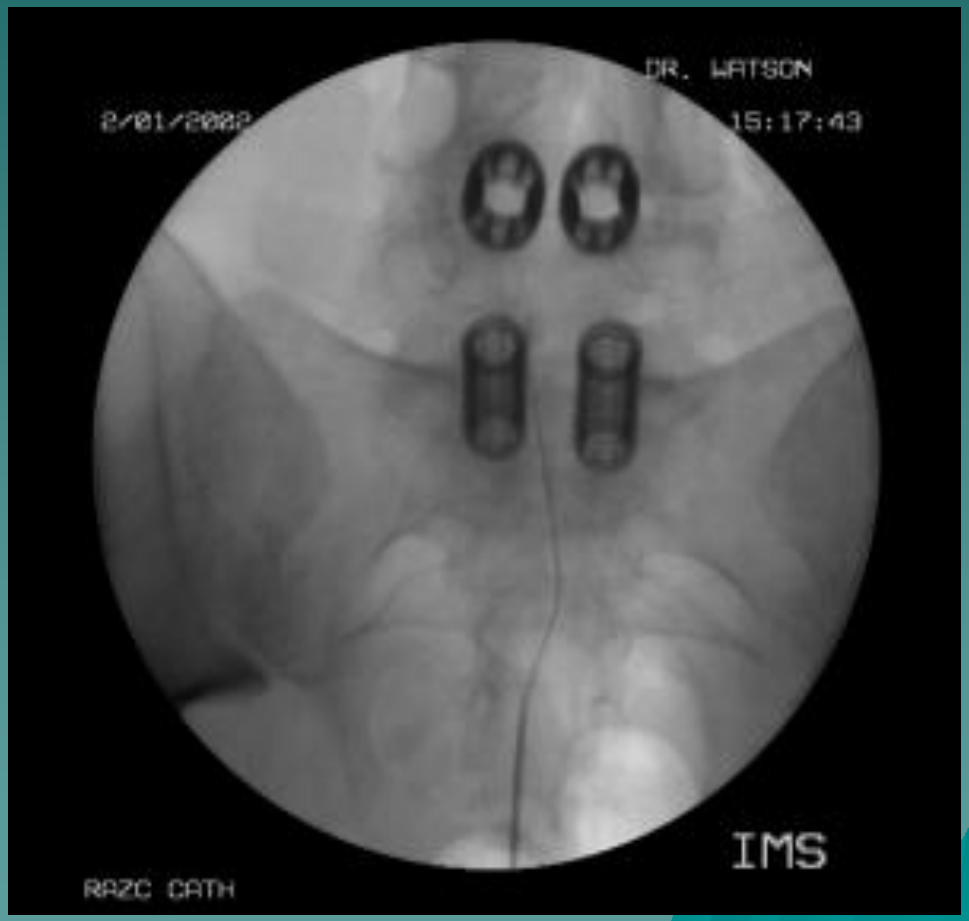
- For caudal epidural steroid injections in managing disc herniation or radiculitis, and discogenic pain without disc herniation or radiculitis the evidence is Level I or II-1 The evidence is Level II-1 or II-2 for caudal epidural injections in managing pain of post-lumbar surgery syndrome, and lumbar spinal stenosis



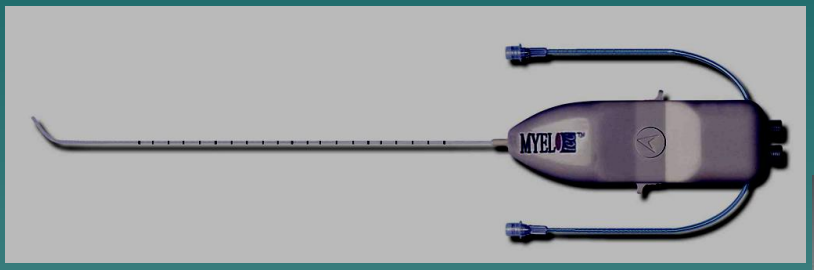


Epidural adhesiolysis/ Racz catheter

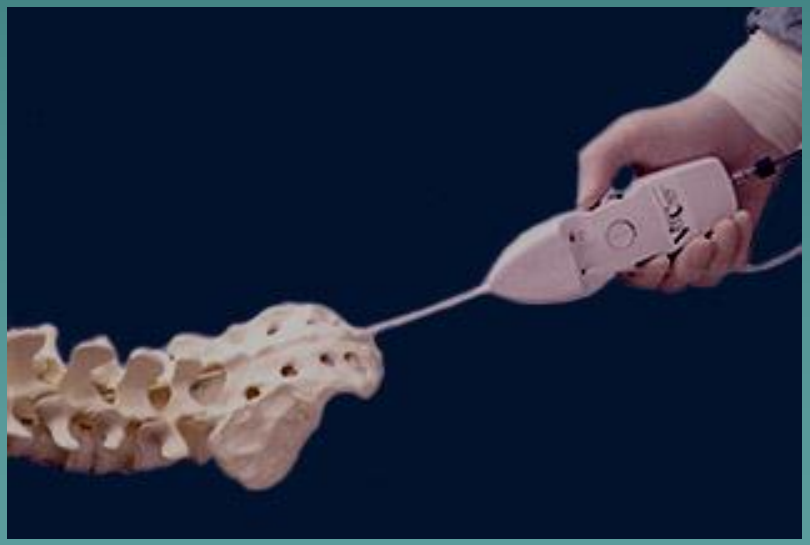
- The evidence is Level I or II-1 for percutaneous adhesiolysis in management of pain secondary to post-lumbar surgery syndrome

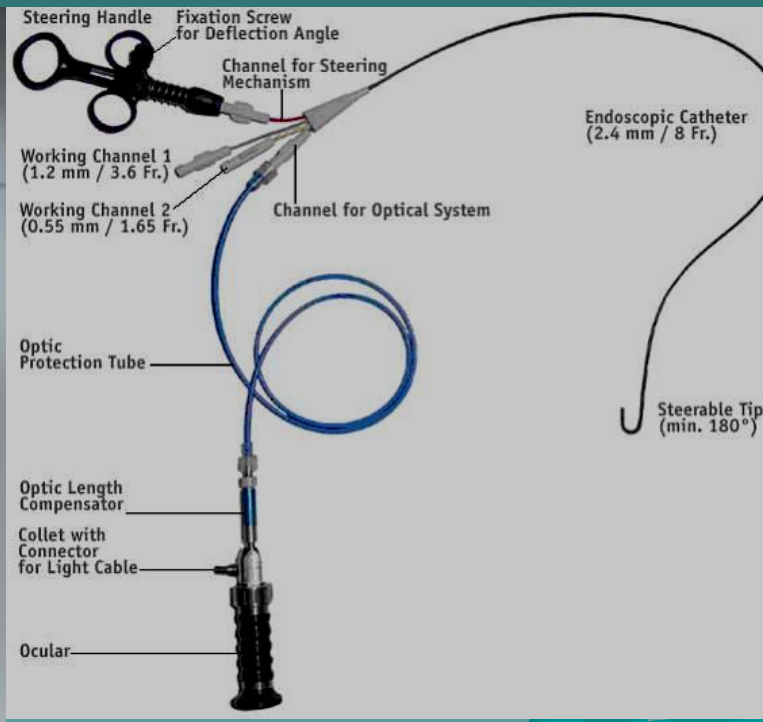


Epiduroscopy –an option ?

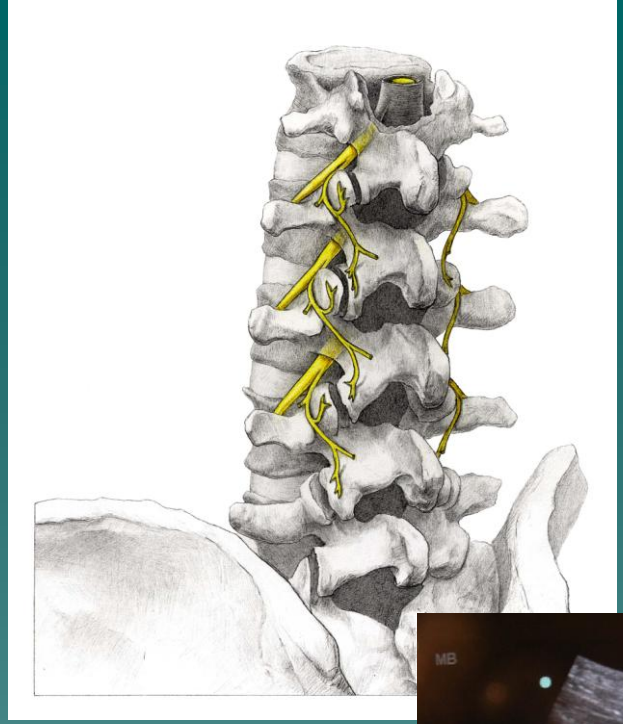


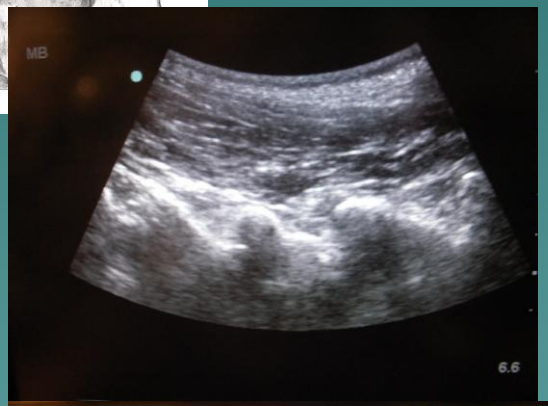
Myelotec
O.D. 2.7 mm/3,0mm

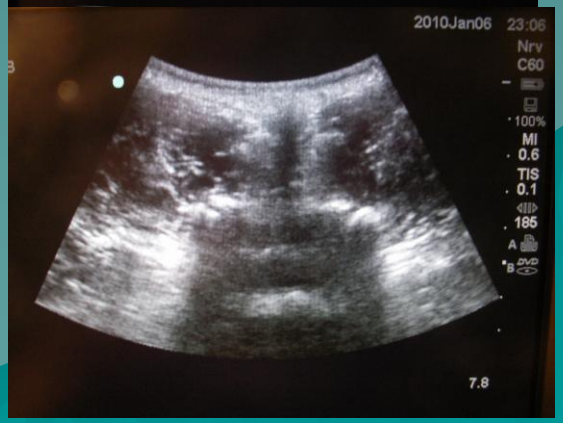


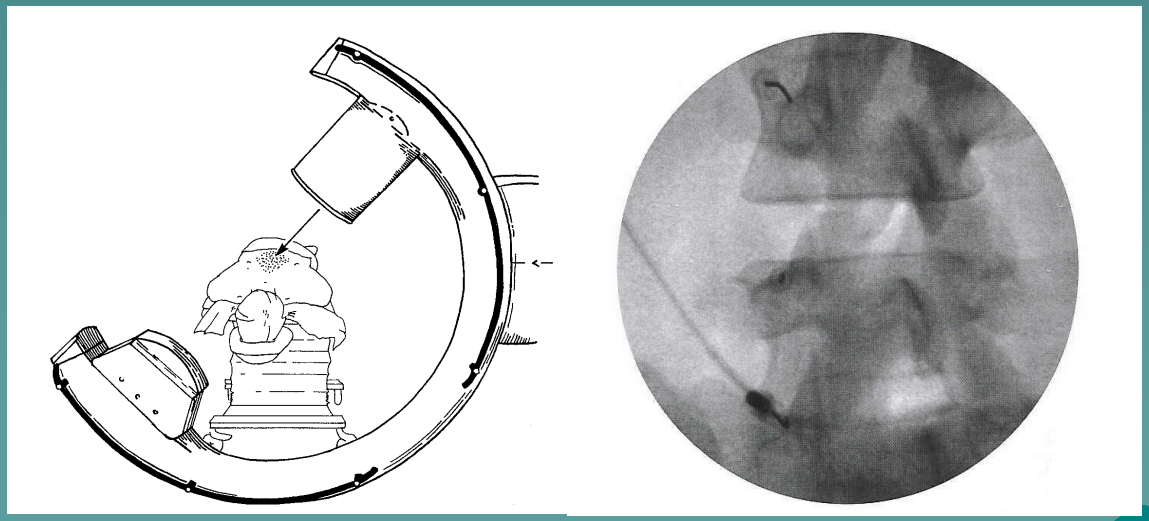


- Intraarticular facet joint injection and medial branch block may be used for the symptomatic relief of facet mediated pain Level II-1 or II-2 for therapeutic cervical, thoracic, and lumbar facet joint nerve blocks

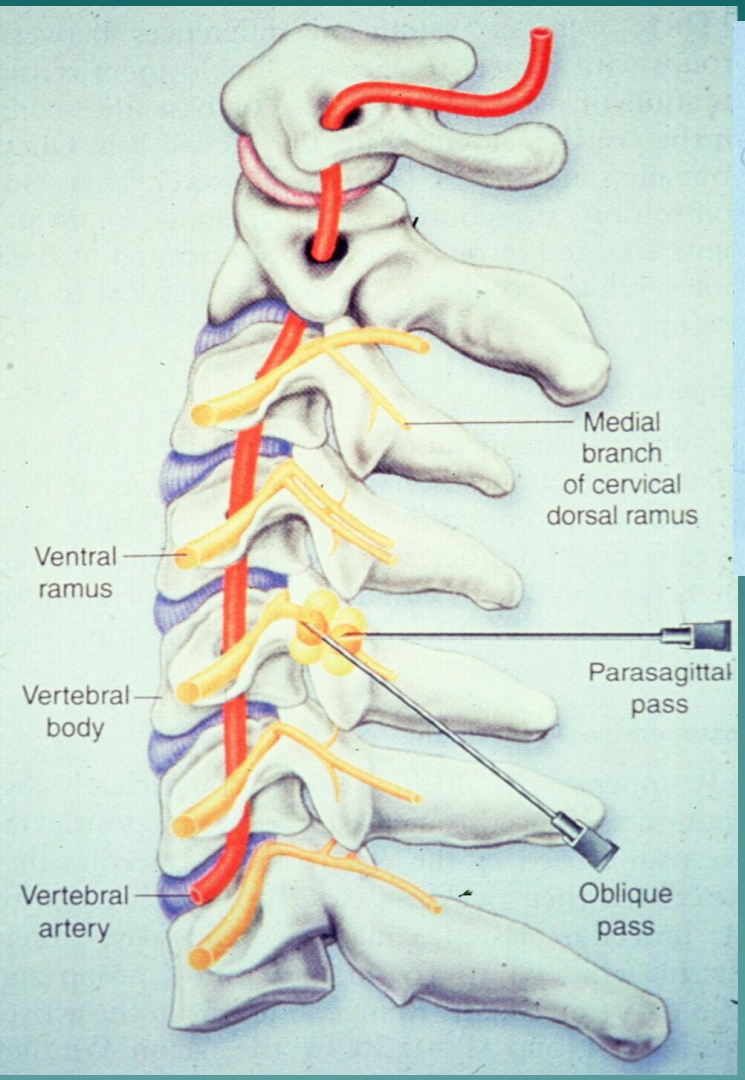


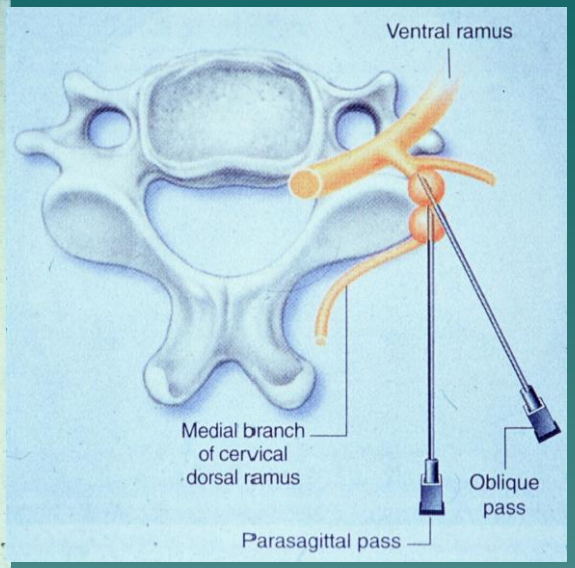


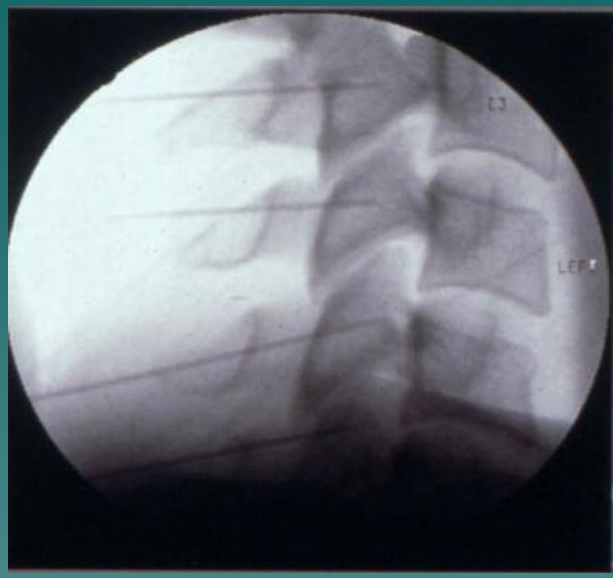


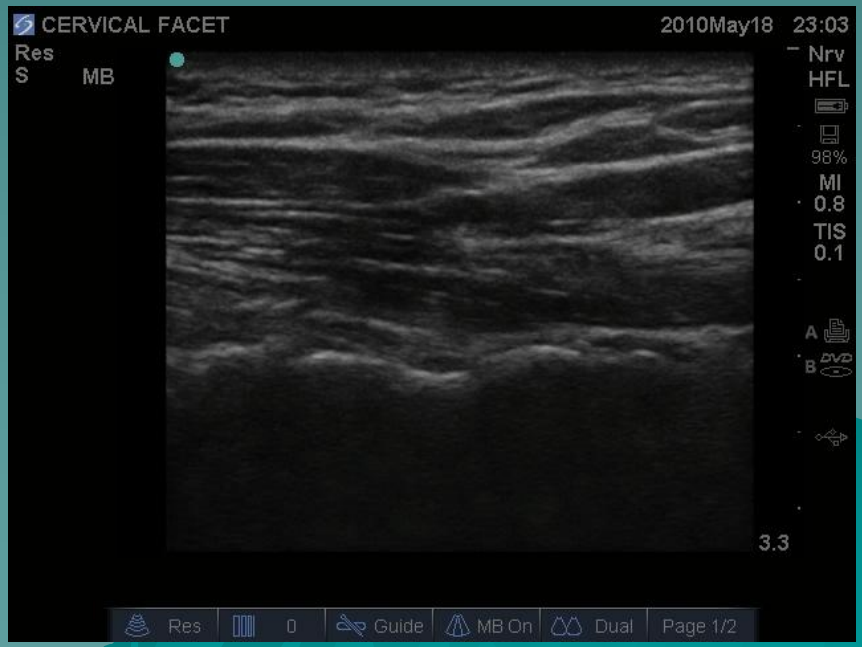


Cervical Medial Branch Block



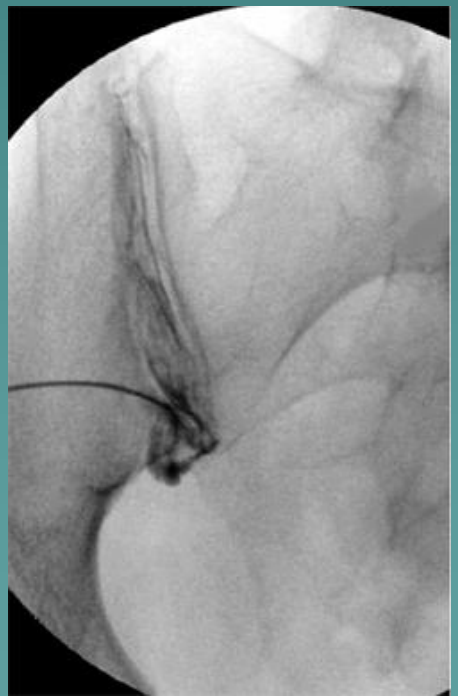


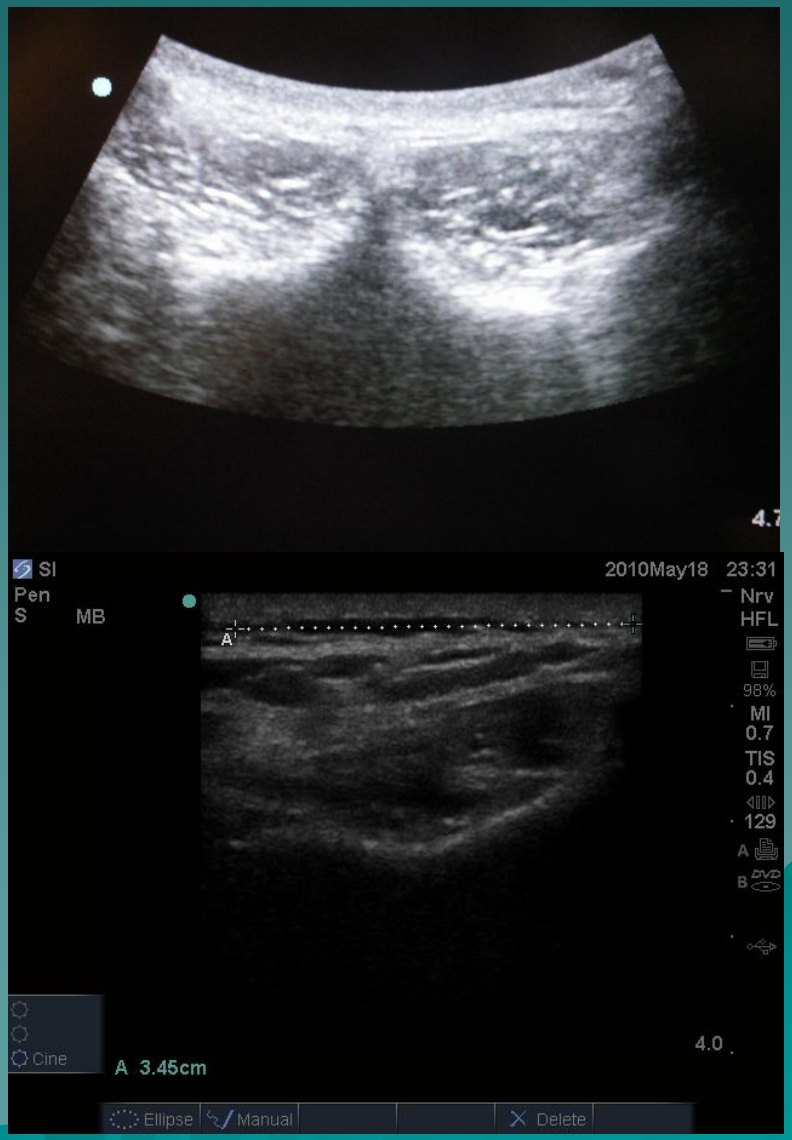




SI Joint

- Sacroiliac joint injections may be considered for the symptomatic relief of sacroiliac joint pain
  Level II-2





Ablative Techniques

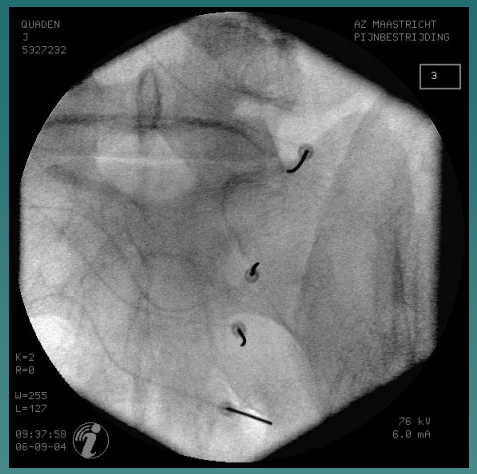
- Chemical denervation (alcohol ,phenol) should not be used in a routine care of patients with chronic non cancer pain
- Radiofrequency ablation recommended when previous diagnostic/ therapeutic injection proved effective

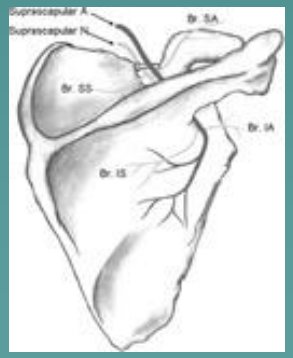
Radiofrequency denervation RF and P-RF

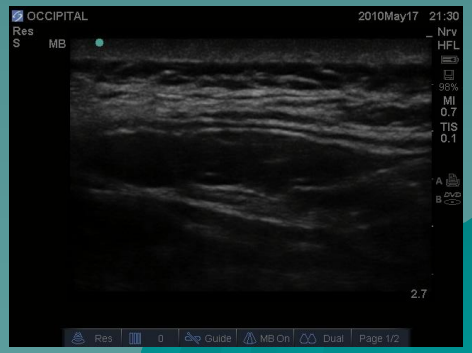
- Lumbar , cervical, thoracic medial branch(facet denervation)
- SI joint denervation
  - *S.Cohen et al.Reg Anesth and Painmed (2003)28(2);113-119*

Peripheral nerves P-RF

- Suprascapular
- Occipital







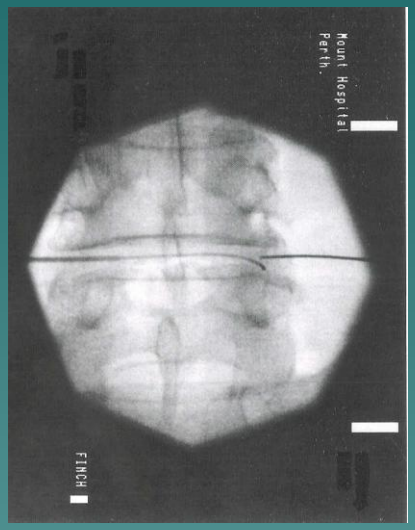
Pulsed Radiofrequency for the Treatment of Occipital Neuralgia: A Prospective Study With 6 Months of Follow-Up

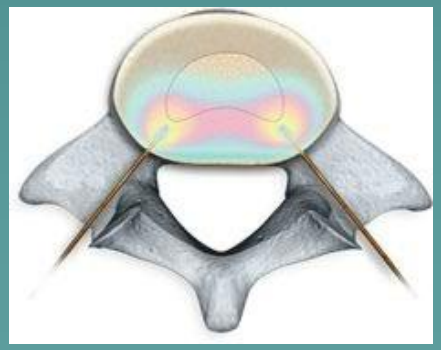
Vanelderen, Pascal; Rouwette, Tom; De Vooght, Pieter; Puylaert, Martine; Heylen, René; Vissers, Kris; Van Zundert, Jan
Regional Anesthesia and Pain Medicine. 35(2):148-151, March/April 2010.

Intradisc Treatment

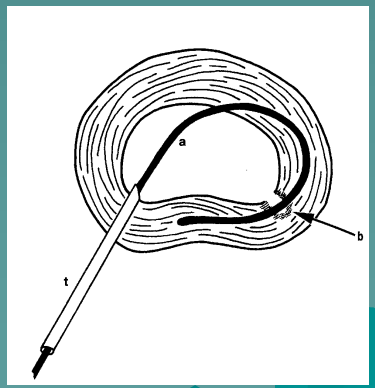
- May be considered for young active patients with early single –level degenerative disc disease with well maintained disc height

discTRODE





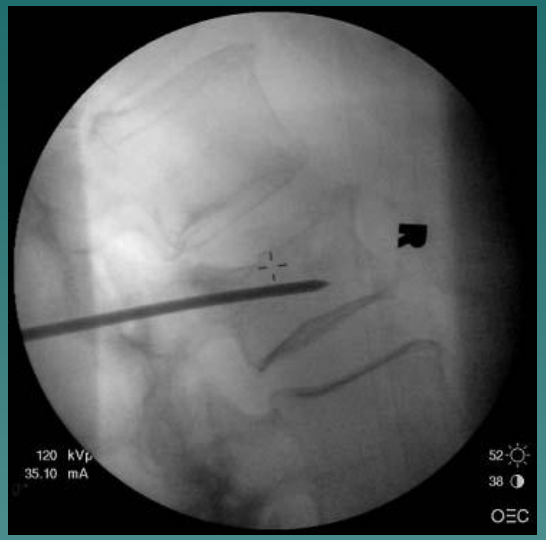
Biaculoplasty

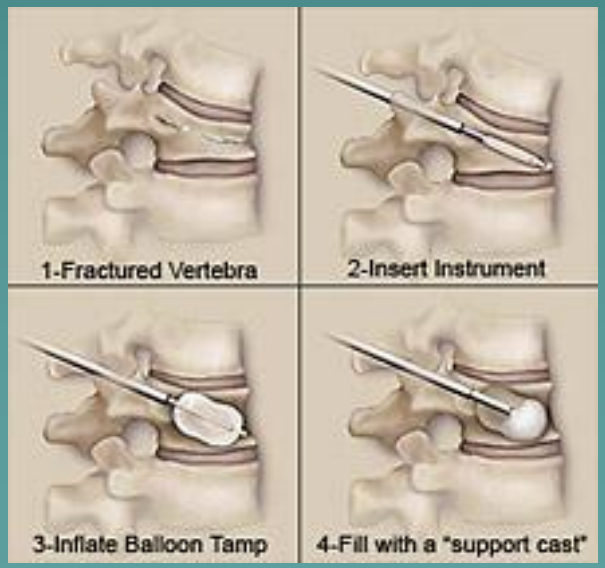


IDET

Vertebroplasty/ Kyphoplasty

- Minimally invasive spinal procedures may be used for the treatment of pain related to vertebral compression fracture





IASP

PAIN® 149 (2010) 124–129

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www.elsevier.com/locate/pain

A randomized placebo-controlled trial of intradiscal methylene blue injection for the treatment of chronic discogenic low back pain

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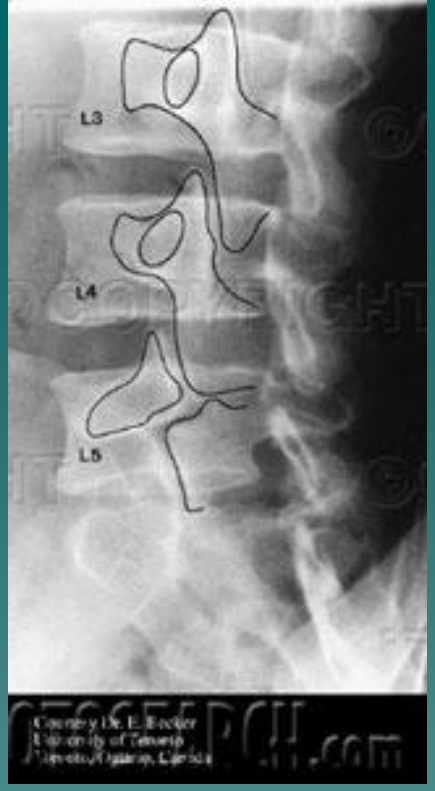
Injection

ABSTRACT

A preliminary report of clinical study revealed that chronic discogenic low back pain could be treated by intradiscal methylene blue (MB) injection. We investigated the effect of intradiscal MB injection for the treatment of chronic discogenic low back pain in a randomized placebo-controlled trial. We recruited 136 patients who were found potentially eligible after clinical examination and 72 became eligible after discography. All the patients had discogenic low back pain lasting longer than 6 months, with no comorbidity. Thirty-six were allocated to intradiscal MB injection and 36 to placebo treatment. The principal criteria to judge the effectiveness included alleviation of pain, assessed by a 101-point numerical rating scale (NRS-101), and improvement in disability, as assessed with the Oswestry Disability Index (ODI) for functional recovery. At the 24-month follow-up, both the groups differed substantially with respect to the primary outcomes. The patients in MB injection group showed a mean reduction in pain measured by NRS of 52.50, a mean reduction in Oswestry disability scores of 35.58, and satisfaction rates of 91.6%, compared with 0.70%, 1.68%, and 14.3%, respectively, in placebo treatment group ($p < 0.001$, $p < 0.001$, and $p < 0.001$, respectively). No adverse effects or complications were found in the group of patients treated with intradiscal MB injection. The current clinical trial indicates that the injection of methylene blue into the painful disc is a safe, effective and minimally invasive method for the treatment of intractable and incapacitating discogenic low back pain.

Love the Dog!



Discography and Intradiscals

Facet Joint

Medial Branch

Vertebroplasty

Epidural or Intrathecal

Transforaminal

Selection, Selection, Selection

Better patient selection=better outcome

Multimodal Approach to Pain Managament