Red flags e strategie di intervento specialistico

Focus su LBP

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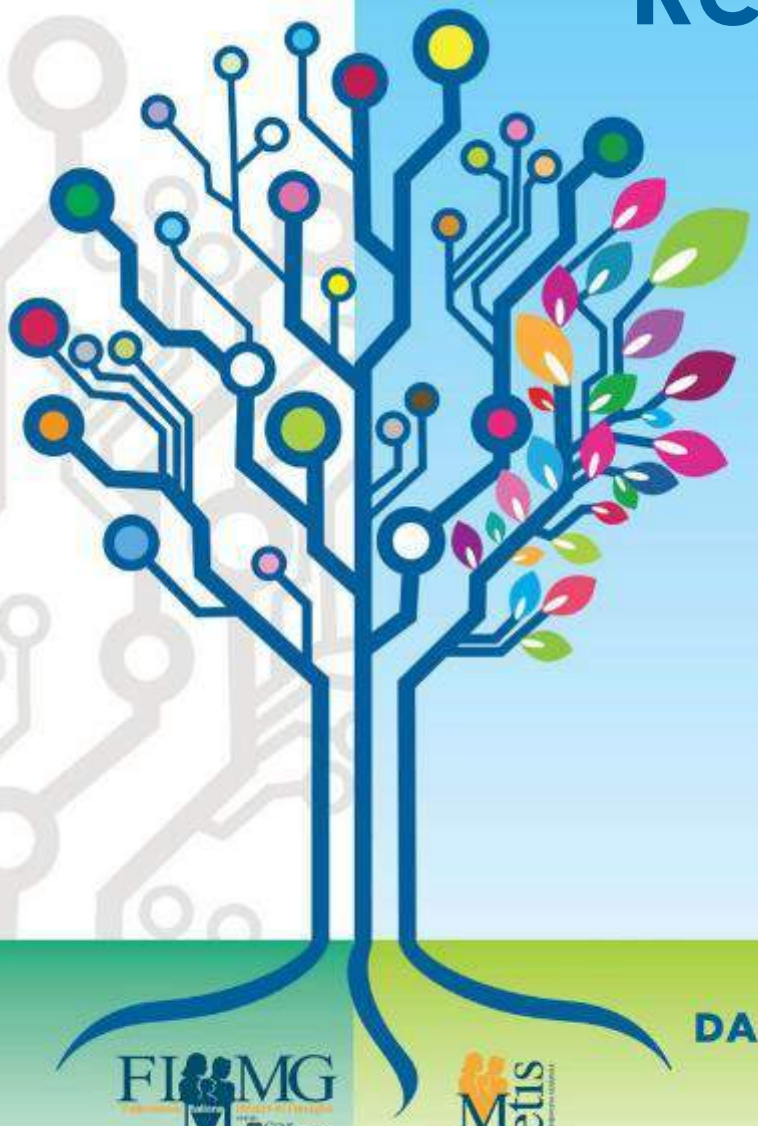

DALLA PRESTAZIONE ALLA PERFORMANCE
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Problem of LBP

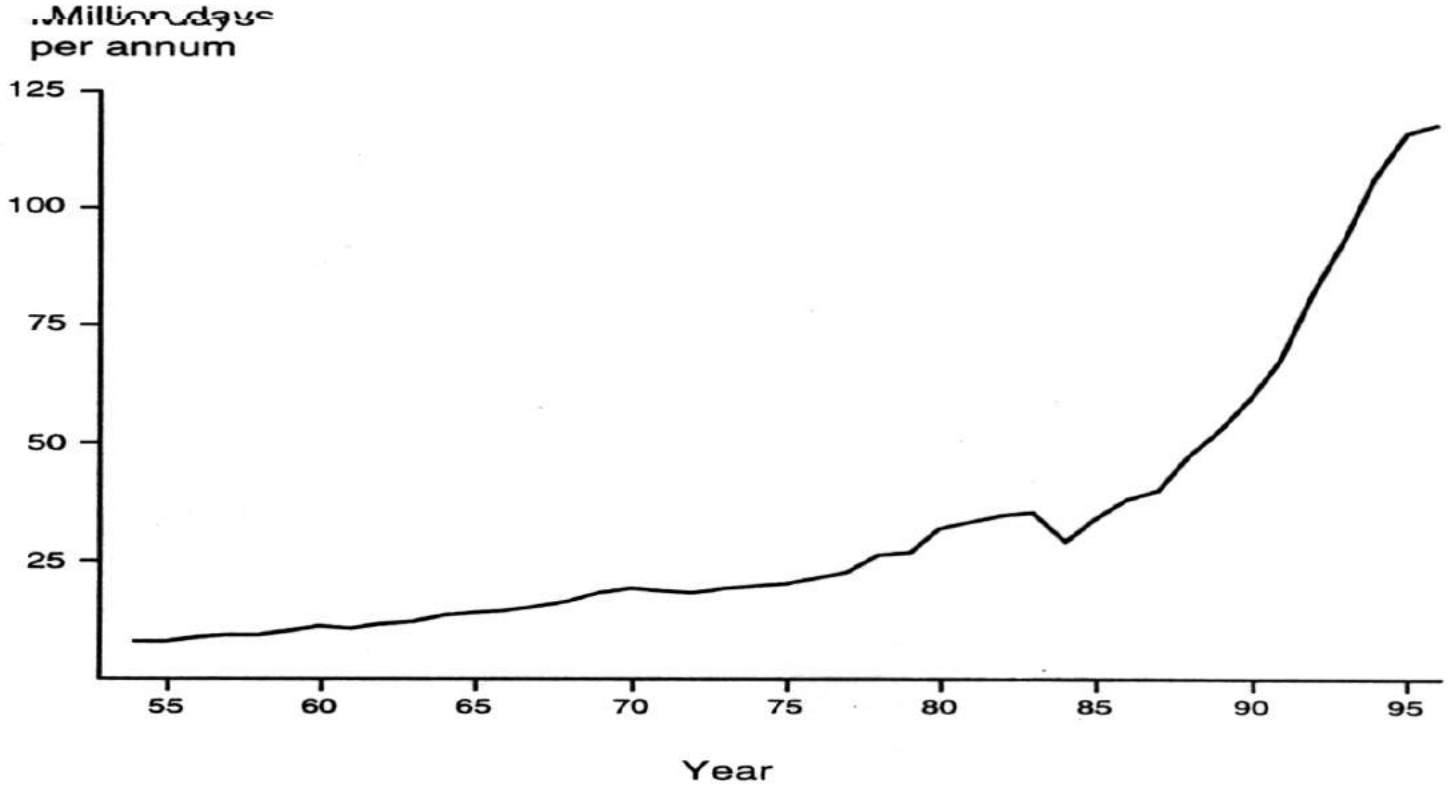


Figure 5.9 Trends in UK sickness and invalidity benefits for back pain, showing the apparent levelling off during 1995–1996. (Based on statistics from the DSS.)

Waddell G.

"Low back pain: a twenthieth century health care enigma" Spine 1996, 21

Structures responsible for pain

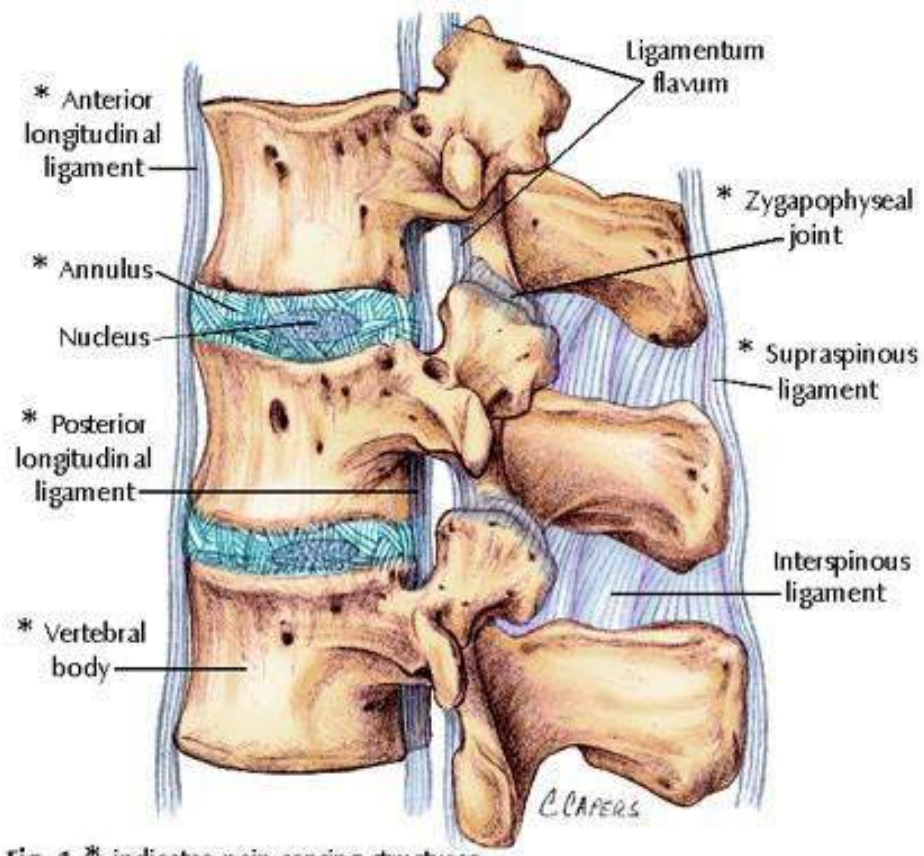


Fig. 1 * indicates pain-sensing structures

Risk Factors

- Heavy physical work
- Lifting and handling of loads
- Awkward postures and movements
- Whole body vibration (truck driving)
- Trauma

Definitions

- Acute LBP = < 6 weeks
- Subacute LBP = 6-12 weeks
- Chronic LBP = > 12 weeks

Classification

- Non specific back pain (majority) = *localized*
- Back pain + radiculopathy/sciatica = *radiating*
- Back pain associated with another specific cause = *referred*

Causes

- Mostly unknown (simple LBP)

- Traumatic
- Referred pain
  - Degenerative
  - Inflammatory
- Infective
- Neoplastic
  - Metabolic
  - Etc

Degenerative and Structural

- Spondylosis
- Spondylolisthesis
- Gross scoliosis and/or kyphosis

Inflammatory conditions

- Ankylosing spondylitiss
- Polymyalgia rheumatica
- Rheumatoid arthritis (rarely)
- Coccydynia

Infections

- Shingles
- Discitis
- Osteomyelitis
- Epidural abscess

Metabolic bone disease

- Osteoporosis
- Osteomalacia
- Paget's disease

Neoplasm

- Myeloma, etc
- Secondaries

Clinical presentation

- Ranges
  - *mild* (muscle spasm)-*severe/unrelenting* (epidural abscess)
- NOT important: recognize a particular classic presentation for various diseases
- IMPORTANT: evaluate for red flags

- Identification of red flags will direct whether further evaluation is required

Table 1 – Questions for disability assessment

Does back pain limit you in:	Standard limits
Bending, li5ing?	Li5 15-20 kg, heavy suitcase, 3-4 yo boy or girl
SiHng?	Sit in an ordinary chair: less than 30 minutes
Standing?	Stand in one place: less than 30 minutes
Walking?	Walk less than 30 minutes (2-3 km)
Traveling?	Travel less than 30 minutes
Socialising?	Miss or curtail social acOviOes (excluding sport)
Sleeping?	Sleep disturbed by pain at least twice a week
Sexual life?	Sexual acOvity reduced or curtailed
Dressing?	Dress: help required with footwear

How do I know my patient has simple low back pain?

- Through history and brief examination
- Red and yellow flags
- Distinguish referred pain from nerve root pain
- Consider diagnostic imaging **only** if red flags

Rx of Simple Low Back Pain

- Educational advice
- Symptom control
- Rapid return to usual activities (incl. work)
- Consider referral to:
  - Physiotherapist
  - Ostheopaths
  - Chiropractors
- Address any psycho-social risk factors
- Assess responses to treatment after about 4 weeks

Not recommended Rx

- Traction
- Electrotherapy
- Ultrasound
- Interferential therapy
- Laser treatments
- TENS

What do I do if it remains after 4-6 weeks?

- Reassess
- Address concerns
- Adjust analgesia to better control pain
- Include adjuvants, if necessary
  - Antidepressant, gabapentin, amitriptyline

Not responding to analgesia?

- ➢ Referral
- ➢ Multi-disciplinary (bio-psycho-social) assessment
- ➢ Cognitive behavior therapy
- Ø Spinal manipulation therapy
- Ø Exercise therapy
- ➢ Back school

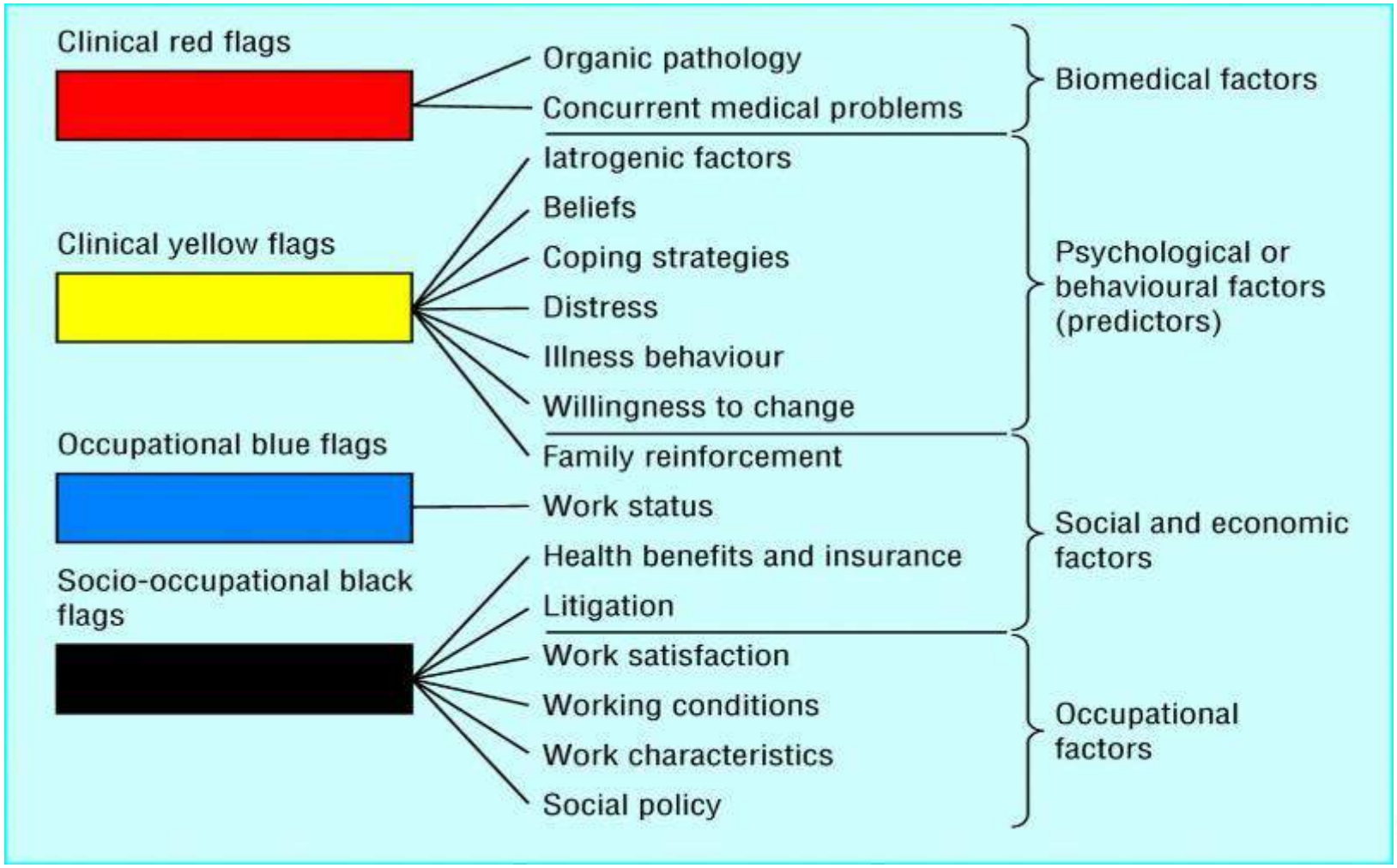
How common are serious causes

- <5% have true nerve root pain
- <1% have serious disease such as spinal tumor or infection
- <1% have inflammatory disease such as ankylosing spondylitis

LBP: Red Flags

Table 1 – Clues in the history that raise a "red flag" in the evaluation of low back pain	
Red flags	**Possible cause**
Duration > 6 wk	Tumor, infection, rheumatologic disorder
Age < 18 y	Congenital defect, tumor, infection, spondylolysis, spondylolisthesis
Age > 50 y	Tumor, intra-abdominal processes (such as an abdominal aortic aneurysm), infection
Major trauma, or minor trauma in elderly	Fracture
Cancer	Tumor
Fever, chills, night sweats	Tumor, infection
Weight loss	Tumor, infection
Injection drug use	Infection
Immunocompromised status	Infection
Recent genitourinary or gastrointestinal procedure	Infection
Night pain	Tumor, infection
Unremitting pain, even when supine	Tumor, infection, abdominal aortic aneurysm, nephrolithiasis
Pain worsened by coughing, sitting, or Valsalva maneuver	Herniated disc
Pain radiating below knee	Herniated disc or nerve root compression below the L3 nerve root
Incontinence	Cauda equina syndrome, spinal cord compression
Saddle anesthesia	Cauda equina syndrome, spinal cord compression
Severe or rapidly progressive neurologic deficit	Cauda equina syndrome, spinal cord compression

LBP: Red Flags



Red Flags

- Spine fracture
- Cancer or infection
- Cauda equina syndrome

Red Flags for spine fracture

- Major trauma
- Minor trauma, or even just strenuous lifting, in people with osteoporosis
- Suspicion of secondary

Rx – suspected spinal fracture

- X-ray
- Refer if fracture; if not, follow up in 10 days
- On follow-up
  - if fracture still suspected, or
  - multiple sites of pain,

  consider **bone scan and referral**

Red Flags for cancer or infection

- Age >60 years and new back pain, or age <20 years
- History of cancer
- Constitutional symptoms (fever, unexplained wt. loss)
- Recent bacterial infections
- Immune suppression
- Pain that worsen when supine, severe night-time pain, thoracic pain
- Structural deformity

Rx – suspected cancer or infection

- Check blood and urine analysis
- If still concerned, consider
  - Referral
  - Bone scan, x-ray, etc
- Note that a negative X-ray alone does not rule out disease

Red Flags for cauda equina syn.

- ➢ Perianal/perineal sensory loss (saddle anesthesia)
- ➢ Bladder dysfunction (urine retention, increased frequency, overflow incontinence)
- Ø Fecal incontinence in the lower
- Ø Neurological deficit extremities
- ➢ Unexpected laxity of the anal sphincter

Rx – suspected cauda equina syndrome

- **Refer immediately**

Yellow Flags

- Belief that pain and activity are harmful
- Sickness behaviors (extended rest)
- Social withdrawal
- Emotional problems
- Problems and/or dissatisfaction at work
- Problems with claims or compensation or time off work
- Overprotective family; lack of support
- Inappropriate expectations of treatment

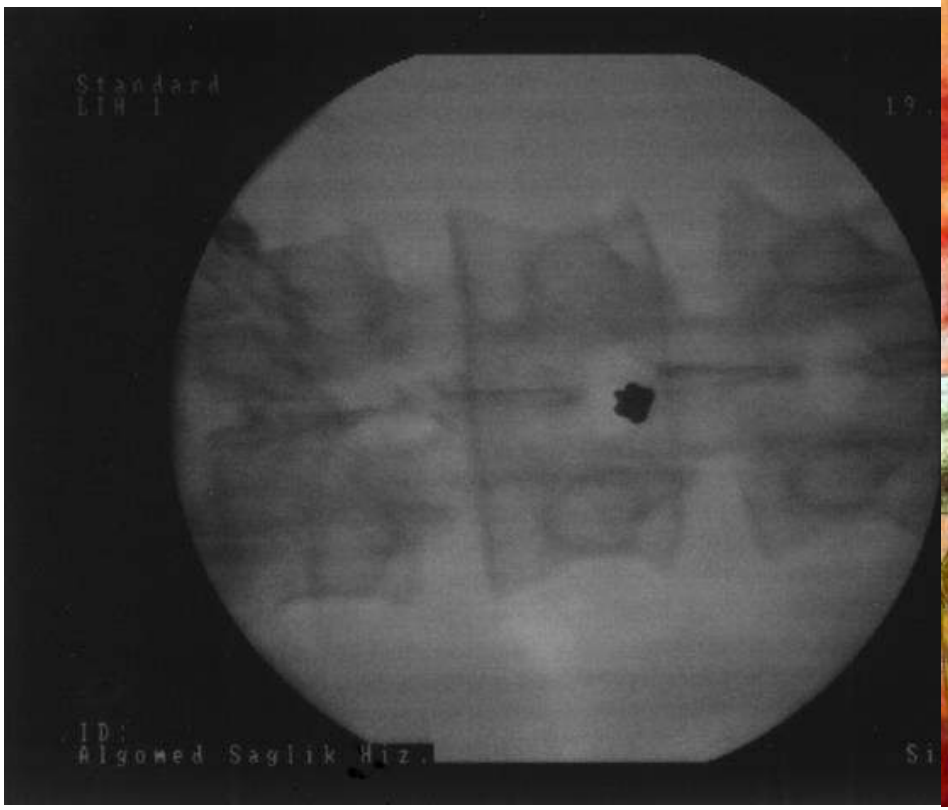
Interventions used in LBP

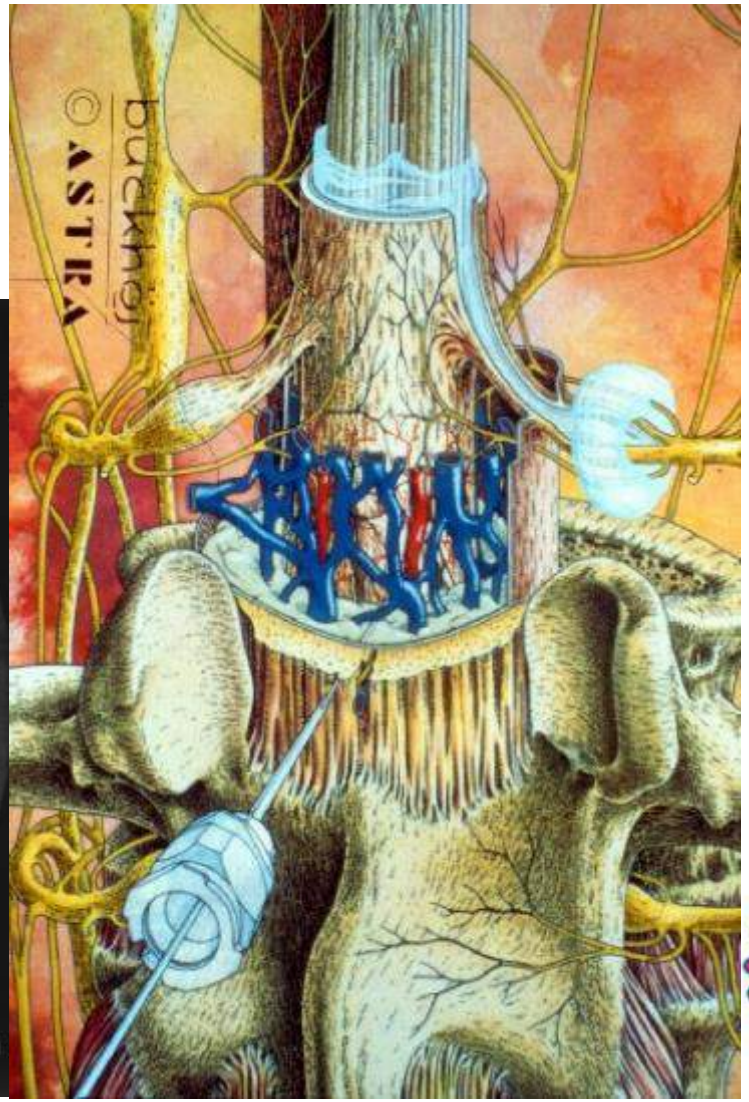
- Nerve blocks
  - DiagnosOc
  - Epidural steroids
  - Facet and sympatheOc nerve block
- Other percutaneous interventions
  - RF facet denervaOon Ø
  - RF parOal rhizotomy Ø
  - RF disc lesioning
  - Lesion of ramus comunicans
  - Nucleoplasty
  - Vertebroplasty

Techniques

- Epidural steroids
  - ConvenOonal
  - Transforaminal
  - Neuroplasty-neurolysis
- Radiofrequency techniques
- Epiduroscopy (diagnostic and therapeutic)
- Spinal cord stimulation

Epidural steroids





Epidural steroids: Contradictory

- McQuay and Moore (NNT)
  - EffecOve on short and median term
- Nelemans et al. (Cochrane)
  - Convincing evidence is lacking on the effects of injecOontherapies for LBP

1 McQuay & Moore. Oxford University Press 1998

2 Nelemans et al. Cochrane 2001

Epidural steroids: Contradictory

- The injection should be x-ray guided, reaching: Ø
  - Ventral part of the epidural space, near the spinal nerve root, or Ø
  - The spinal nerve root, via a transforaminal approach
- ES should be considered only for radicular pain, prolapse of disc, and must be injected close to the target
- Lack of evidence that conventional ES (without x-ray guidance) are effective in radicular pain

European Guidelines Nov. 2004

Transforaminal lumbar outcome

Study	Type	Treatment	Pts (n)	F-U (mths)	Results/Outcome
Devulder 1999	**O/P/RA**	**1. LA + H + saline** **2. LA + steroid** **3. LA + H + steroid**	**20** **20**	**6**	**Group 3 better results at 6 months**
Riew 2000	**RCT**	**1. LA** **2. LA + steroid**	**27** **28**	**13-28**	**1. 67% surgery** **2. 28.5 surgely**
Riew 2006	**5 y F-U**	**1. LA** **2. LA + steroid**	**29 avoided surg**	**5 y**	**No further surgery needed in both groups**
Karppinen 2001	**RCT**	**1. LA + steroid** **2. Saline**	**80** **80**	**Up to 12**	**Rebound effect in steroid group after 3 mo, no difference at 12 mo**
Karppinen 2001 **cont herniations**	**Subanalysis per MRI protocol**	**1. LA + steroid** **2. Saline**	**24** **26**	**12**	**Steroid group less surgery**
Karppinen 2001 Extr. herniations	**Subanalysis per MRI protocol**	**1. LA + steroid** **2. Saline**	**38** **43**	**12**	**Steroid group more surgery**
Vad 2002	**P/RA by pt choice**	**1. ESI + LA** **2. Saline trigger pt injection**	**25** **23**	**12-21**	**Improvement 84 %** **Improvement 48 %**

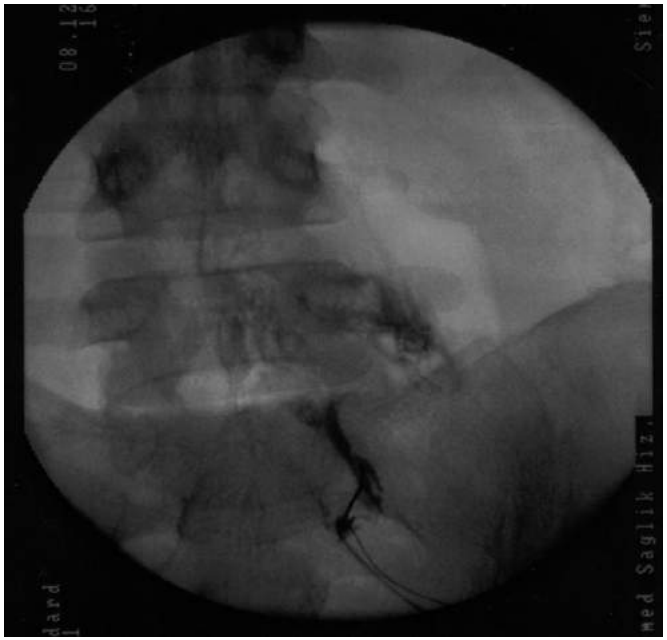
Van Zundert, IMRAPT 2004

Epidural steroids: Recommendations

- It is NOT a generic treatment for all LBP
- Patient selection: subacute radicular pain
- Informed consent before; strict follow-up after
- Absolute aseptic environment, resuscitation material immediately available
- Conventional dorsal approach, without story of previous back surgery
- Transforaminal approach in any other case
- Additional multidisciplinary rehabilitation program

Sacroiliac Joint Injections

There is limited evidence that injection of the sacroiliac joint with corticosteroids relieves sacroiliac pain of unknown origin for a short time (level C).



European Guidelines Nov. 2004

Radiofrequency treatment

- RF zygo-apophyseal joint
- RF adjacent to DRG
- Intradiscal procedures

Radiofrequency treatment

High frequency electrical current adjacent to a nerve

Change in structure g changed pain conducOon

Continuous radiofrequency

Since ’30-ies

Continuous administration of high frequency electrical current

Production of heat

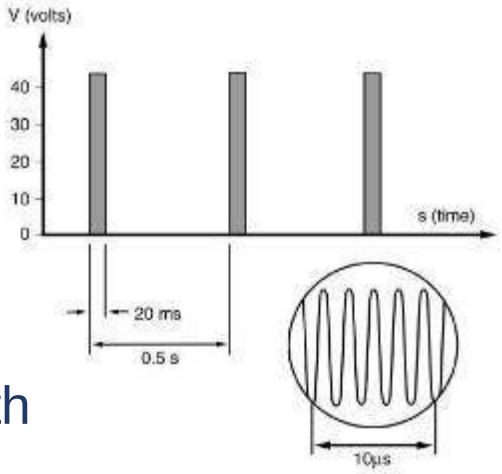
Nerve damage

Pulsed radiofrequency

Since 1998

Short electrical pulses with higher voltage followed by a silent period: heat is washed out

Less nerve damage



Sluijter et al. The Pain Clinic 1998

RF lumbar facet joint: Evidence

4 RCT's

Contradictory results

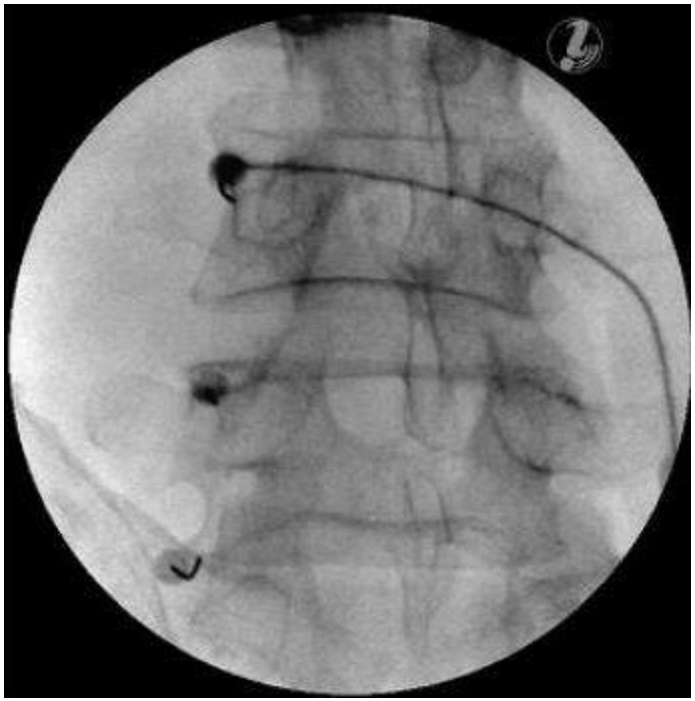
PaOent selecOoncriteria,

diagnosOc blocks,

efficacy parameters

Systematic reviews:

Limited evidence



Gallagher Pain Clinic 1994
Van Kleef Spine 1999
Leclaire Spine, 2001
Van Wijk Clin J Pain
Geurts RAPM 2001
Niemisto Spine 2002
Slipman Spine 2003

Conclusions

- LBP is widely diffused
- In the acute stage, it deserves a careful clinical evaluation, with attention to red and yellow flags
- Pharmaco therapy, advices on behavior, and "wait and see" approach are the right management
- In the subchronic stage (4-12 weeks) a more interventional approach is advisable
- In the chronic stage a multimodal therapy, including rehabilitation, psychological care and interventional therapies, is compulsory

Grazie per l'attenzione

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