EVIDENCE-BASED MEDICINE IN TREATING LOW BACK PAIN
REHABILITACIJA LJUDI S KRONIČNO BOLEČINO V KRIŽU – Z DOKAZI PODPRTA MEDICINA

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Sammary

Non-specific low back pain is not attributable to a recognizable pathology. Acute low back pain is usually self-limiting (90% of patients recover within 6 weeks), although 2-7% develop chronic low back pain. Low back pain is defined as chronic when it persists for 12 weeks or more.

Effective treatments for acute low back pain:

Non-steroidal anti-inflammatory drugs (NSAIDs) and muscle relaxants relieve pain more than placebo does. The various types of NSAIDs and of relaxants are equally effective. Gastrointestinal complications should be considered when using NSAIDs. The efficacy of cox-2 specific inhibitors is similar to that of conventional NSAIDs, with a significantly lower gastrointestinal risk. The advice to stay active expedites the symptomatic recovery and reduces chronic disability.

Effective treatments for chronic low back pain:

The various types of NSAIDs are equally effective and relieve pain more than placebo does. Behavioural treatment has a positive effect on pain intensity, general functional status and behavioural outcomes. Currently, there is no evidence in favour of any type of behavioural treatment. Intensive, multidisciplinary, biopsychosocial rehabilitation with functional restoration is effective in treating chronic low back pain (CLBP). A workplace visit increases the effectiveness of these programs. An intensive back school program in an occupational setting is more effective than no treatment. Little is known about the cost-effectiveness of back schools. Exercises in general are also beneficial in treating CLBP. There is no evidence in favour of one specific exercise due to the contradictory results reported in the literature. Most of the benefit is seen on the short term (3-6 months). Massage is beneficial in reducing pain and improving functional performance.

Povzetek

Nespecifične bolečina v križu ne moremo pripisati nobeni prepoznavni patologiji. Akutna bolečina v križu je navadno samoomejujoča (90% pacientov si opomore v 6 tednih), pri 2-7% pa se razvije kronična bolečina v križu. Bolečina v križu je kronična, če traja 12 tednov ali dlje.

Učinkovito zdravljenje akutne bolečine v križu:

nesteroidna protivnetna zdravila (NSPVZ) in mišični relaksanti lajšajo bolečino bolj od placeba. Različne vrste NSPVZ so enako učinkovite. Pri uporabi NSPVZ je potrebno upoštevati želodčno-črevesne komplikacije. Učinkovitost specifičnih inhibitorjev cox-2 je podobna kot pri običajnih NSPV, želodčno-črevesno tveganje pa je pomembno manjše. Nasvet, da pacient ostane aktiven, pospeši simptomatsko okrevanje in zmanjšuje kronične težave.

Učinkovito zdravljenje akutne bolečine v križu:

Različne vrste NSPVZ so enako učinkovite in lajšajo bolečino bolj od placeba. Vedenjska terapija pozitivno učinkuje na jakost bolečine, splošni funkcijski status in vedenjske izide. Trenutno ni dokazov v prid posameznega izmed vedenjskih pristopov. Intenzivna multidisciplinarna biopsihosocialna rehabilitacija je učinkovita pri zdravljenju kronične bolečine v križu. Obisk delovnega mesta poveča učinkovitost tovrstnih programov. Intenzivna šola proti bolečini v hrbtenici v okviru delovne terapije je bolj učinkovita od odsotnosti zdravljenja. O stroškovni učinkovitosti šol proti bolečini v hrbtu je malo znanega. Telesna vadba je v splošnem koristna pri zdravljenju kronične bolečine v križu. O prednosti posamezne vrste vadbe ni dokazov, saj si objavljeni izsledki nasprotujejo. Največ dobrobiti je opaziti kratkoročno (3-6 mesecev). Masaža koristi pri zmanjševanju bolečine in povečevanju funkcijske zmo-

The effectiveness of other treatments is unknown because of insufficient or conflicting evidence.
Based on these results, the Belgian health insurance system is increasingly inclined not to reimburse the more passive treatments and stimulates a more active approach, and this not only in LBP. Socioeconomic factors play an important role in this respect. Recently, a special nomenclature has been implemented for treatment of CLBP related to work hardening.
Some criticism is advised with regard to the methodology and the interpretation of some evidence-based results.

gljivosti. O učinkovitosti ostalih pristopov ni podatkov oziroma si podatki nasprotujejo.
Na podlagi tega je sistem zdravstvenega zavarovanja v Belgiji vse manj naklonjen povračilu stroškov pasivnega zdravljenja in spodbuja bolj aktiven pristop, ne le glede bolečine v križu. Pri tem so zelo pomembni socioekonomski dejavniki. Nedavno je bila uvedena posebna nomenklatura zdravljenja kronične bolečine v križu v zvezi s programi vrnitve na delo.
Glede metodologije in interpretacije nekaterih izsledkov z dokazi podprtih študij je na mestu nekaj kritičnosti.

ACUTE LOW BACK PAIN

1. Effective treatments for acute low back pain

1) Non-steroidal anti-inflammatory drugs (NSAIDs) relieve pain more than placebo does. An increased overall improvement is seen after 1 week, with a reduced need for additional analgesics. Various types of NSAIDs are equally effective (piroxicam, ibuprofen, diclofenac, felbinac). NSAIDs may cause gastrointestinal complications. Ibuprofen and diclofenac have the lowest gastrointestinal complication rates mainly because of the low doses. A similar risk to other non- steroidal anti- inflammatory drugs is seen with higher doses of ibuprofen. (1)
2) Muscle relaxants: Different types of muscle relaxants are equally effective in reducing pain and increasing mobility (tizanidine, cyclobenzaprine, dantrolene, carisoprodol, baclofen, or diazepam). Adverse effects are common and include dependency, drowsiness, and dizziness. (2)
3) Advice to stay active expedites symptomatic recovery and reduces chronic disability. Bed rest is not an effective treatment for acute LBP because it may delay recovery, whereas staying active and continuing ordinary activities results in a faster return to work, less chronic disability and fewer recurrent problems. Bed rest should be regarded as an undesirable consequence rather than a treatment. (3-4)
4) Cognitive and behavioural therapy reduces pain and disability after 9-12 months. Sick days after 9-12 months are less compared to the traditional management. (5-6)
5) Multidisciplinary treatment programmes (for subacute LBP) reduce sick leave compared to the usual management (including a workplace visit). (7)

2. Ineffective treatment for acute low back pain

Exercise therapy is no more effective than other conservative treatments, including no intervention. There is a lack of efficacy for flexion or extension exercises. Exercise therapy has no therapeutic value in the treatment of acute LBP. (8-9)

3. Unknown effectiveness because of insufficient or conflicting evidence

1) Medication: antidepressants, colchicine
2) Physical therapy: electromyographic biofeedback, epidural steroid injections, lumbar support, spinal manipulation, transcutaneous electrical nerve stimulation (TENS), traction, temperature treatments, massage, facet joint injections, back school, acupuncture

Summary of recommendations for treatment of acute non-specific low back pain

- Give adequate information and reassure the patient.
- Do not prescribe bed rest as a treatment.
- Advise patients to stay active and continue normal daily activities including work, if possible.
- If necessary, prescribe medication for pain relief, preferably to be taken at regular intervals. The first choice is paracetamol and the second choice NSAIDs.
- Consider adding a short course of muscle relaxants, either alone or in combination, if paracetamol or NSAIDs have failed to reduce the pain.
- Consider spinal manipulation for patients who have failed to resume their normal activities.
- Multidisciplinary treatment programmes in occupational settings may be an option, especially for workers with subacute LBP and sick-leave duration of more than 4-8 weeks.

CHRONIC LOW BACK PAIN

1. Effective treatments

1) NSAIDs and opioid analgesics relieve pain more than placebo does. There is no significant difference between

opioid analgesics and NSAIDs, nor between NSAIDs and paracetamol. Various types of NSAIDs are equally effective (piroxicam, indomethacin, ibuprofen, diclofenac, ketoprofen, naproxen and diflunisal). (10)

2) Behavioural therapy has a positive effect on pain intensity, general functional status, and behavioural outcomes when compared to patients on the waiting-list (as control group) or no treatment. However, there is no evidence in favour of any type of behavioural treatment. Moreover, it is unknown which type of patients will benefit most from which type of behavioural treatment. Further research is needed in this field. (11)
3) Multidisciplinary treatment programmes: Intensive (> 100 hours of therapy), multidisciplinary, biopsychosocial rehabilitation with functional restoration provides greater improvements in pain and function than non-multidisciplinary rehabilitation does. (12)
4) Back schools: an intensive back school program in an occupational setting is more effective than no treatment and provides significantly more pain relief after 3 months, but long-term outcomes do not differ. (13-14)
5) Exercise therapy: exercise therapy is an effective treatment method. However, because there is no evidence in favour of one specific exercise due to contradictory results, no conclusions can be drawn about which type of exercise therapy is most effective. Compared to mild exercising, intensive exercising has positive short-term (3-6 months) effects, but these disappear after 12 months. Exercise programs should combine strength training, stretching, and/or fitness. (15)

2. Evidence of ineffectiveness

1) Facet joint injections: there is no evidence that facet joint injections relieve pain or improve function.
2) TENS: there is no evidence to support the use of TENS in the treatment of CLBP. No consensus exists concerning the type and site of application, treatment duration and optimal frequencies and intensities.

3. Unknown effectiveness because of insufficient or conflicting evidence

1) Medication: antidepressants, colchicine, muscle relaxants
2) Physiotherapy: lumbar supports, temperature treatment, massage, manipulation, epidural steroid injection
3) Acupuncture

Summary of recommendations for treatment of chronic low back pain

- Recommended for non-specific CLBP are cognitive behavioural therapy, supervised exercise therapy, brief educational interventions and multidisciplinary (biopsychosocial) treatment.
- Short courses of manipulation/mobilisation and back schools (short-term improvement) can be considered.
- Physical therapy modalities (heat/cold, traction, laser, ultrasound, TENS, massage, corsets) are not recommended.
- The short-term use of NSAIDs and weak opioids for pain relief can be considered, while noradrenergic or noradrenergic-serotoninergic antidepressants and muscle relaxants are not indicated.
- Acupuncture and invasive treatments (epidural corticosteroids, intra-articular (facet) steroid injections, local facet nerve blocks, trigger point injections, botulinum toxin, radiofrequency facet denervations, intradiscal radiofrequency lesioning, intradiscal electrothermal therapy) are not recommended.

SURGERY AND LOW BACK PAIN

Surgery for non-specific CLBP can be considered only if all recommended conservative treatments including multidisciplinary approaches, have been ineffective for 2 years and only in carefully selected patients with maximum 2-level degenerative disc disease.

Surgery for herniated disc is indicated in CLBP patients with predominantly radicular pain. Generally, a part or fragment of the disc is excised to decompress the entrapped nerve root (discectomy).Traditionally, open surgery is performed, but other techniques are also used (minimal-invasive, microscope-aided). Chemonucleolysis (intradiscal injections of chymopapain) is a possible non-surgical alternative. It is more effective than placebo but less effective than surgical discectomy.

There is moderate evidence that surgical discectomy is efffective in carefully selected patients with sciatica due to lumbar prolapse (not relieved by conservative treatment). In 70% to 90% of well-selected patients, good or excellent results for relief of sciatica are achieved for up to 24 months. No evidence exists that any of the available alternative surgical methods is superior or has less complications compared to conventional “open” discectomy. The safety of the techniques remains largely unknown.

Surgery for degenerative disc disorders consists in solid fusion between two or more vertebrae. Numerous fusion techniques are possible: anterior, posterior, or both. Bone allograft or homografts are frequently used to obtain permanent fusion of the intervertebral disc space. A more recent technique is replacement of the disc by an artificial intervertebral joint (disc arthroplasty). However, evidence for the effectiveness of these procedures is limited.

The different techniques are not superior to non-invasive methods such as proper rehabilitation, exercises or behav-

ioural treatment. They implicate higher costs and involve a higher risk of adverse effects. There are no significant differences in outcome among the different surgical techniques. The safety remains largely unknown.

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