

Rehabilitation and clinical-evolutive aspects in a case of paraparesis after multilevel lumbar disc herniation, spinal canal stenosis and spondylolisthesis iteratively operated, in a pluripathological context

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Abstract

Introduction. Disc herniation occurs most commonly in the lumbar region (95% of the cases). The current trend is to have surgery on patients with disc herniation if the kinetic treatment was not beneficial. The data from the literature suggest that early active recovery after lumbar disc herniation is more beneficial than a traditional, less active training program.

Material and method. Having the patient's consent and the approval of the Ethics Committee of "Bagdasar-Arseni" Clinical Emergency Hospital, N.O. 17464 / 14.06.2019, the paper presents the case of a 75-year-old patient with paraparesis after multilevel lumbar disc herniation, spinal canal stenosis and spondylolisthesis iteratively operated, in pluripathological context (hyperplastic type II obesity, hypertension, prostate adenocarcinoma operated in 2015, Clostridium enterocolitis). The patient was clinically and functionally evaluated, according to the standardized protocols implemented in our clinic, through the assessment scales (ASIA, FIM, FAC, QoL, Ashworth and Penn) and also paraclinically, in order to evaluate his biological reserve and his bearing availability of the recovery program.

Results and discussions. The patient presented a slowly favorable evolution (slowed down not only by his multiple above-mentioned comorbidities) from a dysfunctional point of view.

Conclusions. Early active recovery after lumbar disc herniation surgery is more beneficial than a traditional, less active training program for operated herniated discs.

Keywords: *Schizophrenia, spinal cord injury, multidisciplinary, suicide attempt, rehabilitation,*

Introduction

Disc herniation occurs most commonly in the lumbar region (95% of the cases).[1] The current trend is to have surgery on patients with disc herniation if the kinetic treatment was not beneficial. [2] The data in the literature suggest that early active recovery after lumbar disc herniation is more beneficial than a traditional, less active training program.[3]

Material and methods

Case report

Having the patient's consent and the approval of the Ethics Committee of "Bagdasar-Arseni" Clinical Emergency Hospital, N.O. 17464 / 14.06.2019, the paper presents the case of a 75-year-old patient with paraparesis after multilevel lumbar disc herniation, spinal canal stenosis and spondylolisthesis iteratively operated, in pluripathological context (hyperplastic type II obesity, prostate adenocarcinoma operated in 2015, coxarthrosis, gonarthrosis, bilateral right>left calcaneal enthesophytosis, 2nd stage essential hypertension, Clostridium difficile enterocolitis).

Objective examination on admission

Good general state, afebrile, well-represented adipose connective tissue, non-palpable and painless superficial ganglionic system, muscular system: hypotonic, hypokinetic in the right lower limb, post-operative lumbar scar in the process of healing without suture threads (Fig.1). Respiratory system: present bilateral bladder sound without rallies, SaO₂=97% spontaneously.

Cardiovascular system: rhythmic cardiac noises, without audible murmurs, BP10/60 mmHg, AV= 78 b/min. rhythmically. Digestive system: bulky abdomen through the adipose panniculus, movable with respiration, spontaneously painless and on palpation, loose bowel movement, fecal incontinence with diarrhea. Genito-urinary system: bilaterally negative Giordano, Urinary catheter.



Fig. 1 Post-operative lumbar scar in the process of healing without suture threads Comminuted L2 operated fracture before surgery

Neuro-myo-arthro-kinetic examination

Conscious, cooperative, auto and allo-psycho-temporo-spatial orientation, paraparesis-type motor deficit predominant in the right lower limb, hypoesthesia-like sensitivity disorders in the right lower limb, decreased

osteo-tendinous reflexes (OTR) in the right lower limb, bilateral negative Babinski. Anal sphincter disorder, neurogenic fecal and bladder incontinence. Muscular force deficit in the right lower limb Deficit 3/5 proximal, intermediate, distal . FUNCTIONALLY: he maintains the sitting bedside and wheelchair position, he moves by means of a walking frame on short distances. The patient was clinically and functionally evaluated, according to the standardized protocols implemented in our clinic, through the assessment scales: AIS (American Spinal Injury Association Impairment Scale), FIM (Functional Independence Measure), QoL (Quality of Life), Ashworth and Penn, FAC (Functional Ambulation Category).

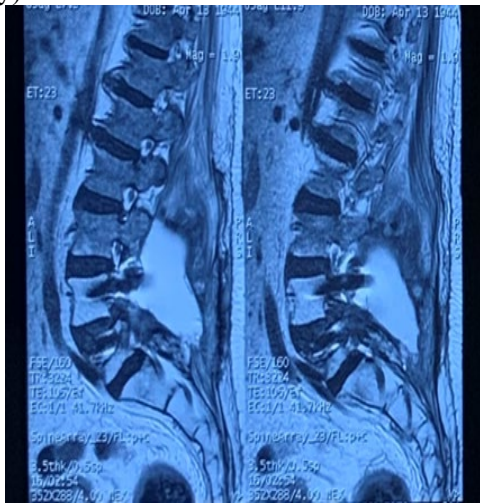


Fig.2 L4-L5 posteriorly non-compressive liquid collection and L2-L4 spine processes

The patient was paraclinically evaluated, in order to assess his biological reserve and his bearing availability of the recovery program. For this purpose, both laboratory and imaging investigations have been used. Because the patient complained of lumbar pain during his hospitalization, an MRI of the vertebral column was performed – L4-L5 posteriorly non-compressive liquid collection and L2-L4 spine processes, the neurosurgeon considered that it was not a neurosurgical indication.

Along the hospitalization, the patient underwent a complex rehabilitation program which comprised: **MEDICATION TREATMENT**(LMWH-type anticoagulant, platelet antiaggregant, diuretics, NSAIDs, canal blockers of voltage-barrier calcium, antibiotic, hydro-electrolytic re-balancing, gastric antiacid, injectable iron supplement, vasodilator, beta-blocker, anti-angina drug, ACE-receptor binding inhibitor, urinary inhibitor, statin, anti-diarrheic drugs, human albumin and **PHYSICAL TREATMENT** (kinesiotherapy). Moreover, he underwent psychological treatment/ psychotherapy.

Evolution and clinical-therapeutic/recovery results

Afebrile, cardio-respiratory balanced along the hospitalization. The patient presented a slowly favorable

evolution (slowed down not only by his multiple above-mentioned comorbidities) from a dysfunctional point of view. The evolution was made difficult also by the fact that he presented loose stools immediately after admission and he was diagnosed with *Clostridioides difficile* enterocolitis, for which reason he underwent antibiotic treatment according to the indications of the infectious disease physician and all valid epidemiologic norms were implemented. Thus, he was isolated, not being able to attend the kinesiotherapy lessons in the gym, but only in the ward. Moreover, ever since admission, he complained of pain in the right lower limb, for which reason, X-rays of the femur, ankle and knee were performed.

They revealed changes of advanced right coxarthrosis, gonarthrosis, and calcaneal enthesophytosis. All these hardened the patient’s evolution from a functional point of view. Upon discharge, the patient steps by did of a walking frame on short distances and between parallel poles.

Conclusions

Early active rehabilitation after lumbar disc herniation surgery is more beneficial than a traditional, less active training program for operated herniated discs.

Recommendations

To continue the rehabilitation program according to the indications received upon discharge, to respect the Decalogue of the secondary prophylactic rules “orthopedic knee hygiene” (after Sbengehe 1987), to respect the Decalogue of the secondary prophylactic rules “orthopedic hip hygiene” (after Sbengehe 1987), periodic follow-up in our clinic and oncologic monitoring

Author contributions.

The manuscript has been read and approved by all the authors. The authors assume entirely the responsibility regarding the un-ethical scientific conduct, including plagiarism. The authors will reveal any conflict of interest concerning the manuscript.

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