

SUCCESSFUL REHABILITATION PROGRAM AFTER AIS/FRANKEL C PARAPLEGIA THROUGH A RECENTLY OPERATED LUMBAR DISC HERNIA

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Abstract

Introduction. Intervertebral disc herniation is the pathological process by which fragments of the nucleus pulposus tear the fibers of the annulus fibrosus and come into contact with the root of the spinal nerve (1). The most significant functional damage generated by the lumbar disc herniation is paraplegia and can be ameliorated by an early and staged specific rehabilitation program.

Material and methods. This paper presents the case of a 56-year-old patient who was admitted to the Neurosurgery Clinic (NCH) III of SCUBA for low back pain and motor deficit, AIS Frankel C paraplegia. The left lower limb was more affected than the right one. It occurred following a thoraco-lumbar medullary compression and a paramedian lumbar disc herniation L3. The patient was treated surgically. Subsequently, the patient was transferred to the Neuro-Muscular Recovery Clinic of SCUBA for the specific rehabilitation treatment, with indication for mobilization. He was dynamically evaluated using the following scales: quality of life assessment (QOL), modified Ashworth scale, FAC International scale, Independence assessment scale in daily activities (ADL / IADL), spinal cord independence measure (SCIM), evaluation of muscle strength on MRC scale, evaluation of AIS.

Results. The patient benefited from a complex program of neuro-muscular rehabilitation, having a favorable evolution with an improving score of the evaluating scales and finally gaining his gait balance, including ascending and descending stairs (instrumentally assisted for left plantar dorsiflexion movement with orthosis walking). At discharge the patient's neurological deficit was reclassified as AIS/Frankel D paraplegia, with the neurogenic bladder and bowel having been remitted.

Discussion. The disc herniation at L3 level generated a cauda equina syndrome, which initially generated a paraplegia. When the inflammation remitted it became clear that the left L4 root was affected, with a complete deficit of plantar dorsiflexion. In conclusion it was not a case of spinal cord syndrome (as the spinal cord ends at L2 level) or conus medullaris syndrome.

Conclusions. The interdisciplinary therapeutic approach together with a specific, customized rehabilitation program for a patient with AIS/Frankel C paraplegia after a surgically treated disc hernia is successfully improving the neuromuscular deficit and upgrading the patient's quality of life.

Keywords: *paraplegia, disc hernia, low back pain*