

A COMPLEX CASE OF NEURO-MUSCULAR REHABILITATION WITH FAVORABLE EVOLUTION IN A PATIENT WITH INCOMPLETE PARAPLEGIA POST THORACIC OSTEOMYELITIS, SURGICALLY TREATED, WITH MULTIPLE PULMONARY AND RENO-VESICAL DETERMINATIONS



Ioana Andone¹, Carmen Chipăruș¹, Magdalena Lăpădat¹, Ionut Colibășeanu¹, Iulia Nohai¹, Liliana Onose³, Aura Spînu¹, Gelu Onose^{1,2}

¹The Teaching Emergency Hospital "Bagdasar-Arseni" (TEHBA), Bucharest, Romania ioanaandone11@yahoo.com

²The University of Medicine and Pharmacy "Carol Davila" (UMPCD), Bucharest, Romania

³The Medical Service of Metrorex SA, Bucharest, Romania

Abstract

Introduction: Vertebral osteomyelitis refers to an infectious disease that affects the vertebral body, the intervertebral disk, or adjacent para-spinal tissue (2-7% of all musculoskeletal infections) and can determine severe or rather permanent sequels.

Materials and Methods: This paper presents the case of a 61-year-old obese patient, with personal antecedents of arterial hypertension and chronic obstructive bronchopneumopathy hospitalized at the Neurosurgery Clinic (NS) II of TEHBA in a critical condition, for incomplete AIS/Frankel C paraplegia with sphincter's dyscontrol and renal and respiratory failure. After complex para-clinical investigations, was discovered a T6-T7 osteomyelitis (probably with renal start point - the onset of the disease being with a urinary infection), left pleural empyema with left pleural cystic collection, emphysema bubbles in both hemi-thorax. After repeated thoracic surgery examinations, it was made a left pleural puncture and after 5 days a pleurostomy was decided with removal of 1000 ml serohematic fluid and subsequently a new incision was done, with partial evacuation, as a result of subcutaneous emphysema in the left hemi-thorax.

When the patient became hemodynamic and respiratory stable it was decided a neuro-surgical intervention with T6 discectomy. In our clinic, the patient initially followed a complex nursing program and subsequently a rehabilitation adequate program. The patient's evolution was initially severe, requiring oxygen therapy for a long time and presenting an episode of swelling with macular eruption with urticaria in the lower limbs followed by a bladder globe (with removal of 3000 ml urine, followed by fixed urinary catheterisation – possibly autonomous dysreflexia). After stabilizing the patient, her evolution was favourable with oedema and rash disappearance, with respiratory function improvement and quitting oxygen therapy. The patient was assessed functionally using the following scales: AIS / Frankel, modified Ashworth, Functional Independence Measure (FIM), Life Quality Assessment (QOL), FAC International Scale, Independence Assessment Scale in Daily Activities (ADL / IADL), Walking Scale for Spinal Cord Injury (WISCI).

Results: The patient benefited from a complex neuro-muscular rehabilitation program, having a favourable evolution, with an increase in the evaluated scales scores and thus, with a final performance of walking without a support for short distances, including climbing/ descending stairs, as well as a sphincter re-education with the neurogenic bladder remission.

Conclusions: The para-clinical assessments followed by prompt thoracic- and neuro-surgery intervention, associated with complex nursing measures, with personalized rehabilitative kinesiological programs, in an obese patient with post-osteomyelitis paraplegia determined the neuro-locomotor impairment and respiratory dysfunction improvement and sphincter re-education, thus enhancing including patient's quality of life.

Key words: paraplegia, osteomyelitis, pleurostomy, neuro-muscular rehabilitation

Selected bibliography:

1. Onose G., Angheliescu A., Ghid de diagnostic, tratament și reabilitare în suferințe după traumatisme vertebro-medulare, Editura Universitară "Carol Davila" București, 2011
2. Lener S, Hartmann S, Barbagallo GMV, Certo F, Thomé C, Tschugg A. Management of spinal infection: a review of the literature. *Acta Neurochir (Wien)*. Jan 22, 2018.
3. Peter C; Dickerson L; Sack J "Diagnosis and Management of Osteomyelitis". *American Family Physician*. 12 (63): 2413–2421. Retrieved March 27, 2012