

is to discuss face to impairment of spinal posture, a change in neurological examination and rarely the onset of pain. Treatment often requires extensive anterior and posterior arthrodesis with bone graft.

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### Diffuse idiopathic skeletal hyperostosis (DISH) causes autonomic dysreflexia in SCI

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**Keywords:** DISH; Tetraplegic; Dysreflexia

**Introduction.**– Diffuse idiopathic skeletal hyperostosis is a cause of cervical spinal cord injury. Autonomic dysreflexia is produced to tetraplegics and above T6 level paraplegics due to noxious stimuli below the level of the injury originated by bladder and bowel dysfunction and by many other causes derived from all systems of the human body.

**Observations.**– In this study we present a 45-year-old man with C7 (left) C8 (right) complete spinal cord injury for 20 years. This man was referred to our department suffering from elevated blood pressure up to 26 mmHg and headache while sitting in his daily wheelchair. Symptoms were relieving while he was laying on his bed. The fluctuation of symptoms did not set the necessity for drug therapy. Tests for “usual suspects” causes were negative. In Thoracic spine X-ray DISH was diagnosed which was symptomatic only in sitting position during his breathing maneuvers to activate diaphragm. After the diagnosis was set, NSAIDs therapy combined with sitting and postural patterns education and thoracolumbar orthosis, symptoms were subsided.

**Discussion.**– Investigating the causes of autonomic dysreflexia should always take into account the common and the rare.

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### High intensity body weight support treadmill training improves walking ability without increase of spasticity in a chronic incomplete tetraplegia: A single case study

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**Keywords:** Body weight support treadmill training; Incomplete tetraplegia; Walk; Spasticity

In last decade, Body Weight Support Treadmill Training (BWSTT) has shown walking improvement after SCI but effect on spasticity remains unaddressed. The aim was to assess the BWSTT effects on both walking and spasticity level after incomplete tetraplegia.

**Methods.**– A 30 years old female with chronic incomplete tetraplegic (AIS D) was included. Intervention consisted in 20 BWSTT one-hour sessions, repeated 5 days a week, lasting 4 weeks. Kinematic walking recording, six minutes walk-

performed before and after the intervention.

**Results.**– After intervention, velocity increase from 0.61 ms<sup>-1</sup> to 0.8 ms<sup>-1</sup> related to cadence increase from 75 to 93 steps a minute. 6MWT reveals a distance increase from 198 to 336.6 m. Kinematic evidence improvements both during support phase without knee recurvatum and ankle flexion increase (5° to 20°) and during swing phase with knee flexion increase (10° to 30°) and ankle extension decrease (15° to 5°). No spasticity increase was reported.

**Discussion.**– BWSTT lead to an improvement of both performance and quality of walk without spasticity increase in a participant with chronic incomplete tetraplegia.

**Conclusion.**– BWSTT should be recommended after incomplete tetraplegia without fear of negative effect.

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### Employment after spinal cord injury

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**Introduction.**– The purpose of this study was to describe difficulties and aspects of employment after spinal cord injury (SCI) in patients with SCI who were employed before their SCI.

**Methods.**– We examined cases of the 650 members (510 males and 140 females) with known addresses in the biggest association of SCI patients aged from 18–72 years with average time since SCI 9 years. We excluded 95 men and 37 women that were pensioners at SCI time. From the remaining 518 patients, 230 were employees of public sector. From the rest 288, 195 were employees of private sector. Ninety-three patients were not employed at SCI time. We separated them in four categories according to spinal cord level (T6 and lower, T1 to T6, A7, A6).

**Results.**– 50.4% of SCI patients who were public servants returned to their job while the percentage for private sector was 25.6%. From those who were not employed before SCI 55.9% found a job.

**Conclusion.**– Returning to work must be one of rehabilitation's targets. In our country the social services with the contribution of EU and the reduction of architectural barriers offer the opportunity to patients with SCI to have an employment.

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### Thermographic evaluation of the rehabilitation program effects on peripheral circulation in patients with spinal cord injury

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**Keywords:** Thermographic evaluation; Rehabilitation; Spinal cord injury

**Introduction.**– The increasing incidence of spinal cord injuries, especially in young active people, lead to the need for new therapeutic solutions. The aim of our study was to assess through thermographic evaluation whether there is an improvement in peripheral circulation after rehabilitation.

**Methods.**– We assessed a number of 40 patients admitted in the III-rd Clinic of the National Institute of Physical Medicine and Rehabilitation. We divided the patients in 2 groups: 19 patients who received only physiotherapy and 21 patients who received physiotherapy and electrotherapy. They followed a 3-week rehabilitation program, 2 times per day. The clinical and functional assessment (SF-36, ASIA score) has been performed at the beginning and after the treatment. Thermographic evaluation has been performed at day 1, 7, 21 of the treatment, before and after each session of treatment, using Thermalcam Flir and Glamorgan protocol.