CO13-006-e
Cycling in critically ill patients in a neurological intensive care unit: A pilot study
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Objective To determine the safety and feasibility of cycling in critically ill patients with brain or spinal cord injury. Methods Patients with brain or spinal cord injury, either ventilated or not, who were admitted to the neurological intensive care unit (ICU) for at least one day were included. A multidisciplinary team with a physiotherapist, occupational therapist, nurses, intensive care doctors and a rehabilitation doctor screened the patients every morning for indications of early rehabilitation, specifically for indications of cycling with a cyclo-ergometer. This technique was used amongst other rehabilitation prescriptions in the neurological ICU such as mobilisations, neuromuscular-electrostimulation, ergonomic postures and transfer from bed to chair. The cyclo-ergometer used was MOTOmed and gave the possibility to do passive, motor-assisted, or active resistive training. The use of MOTOmed was assessed from a safety (contraindications and side effect profile) and feasibility (time constraints, availability, access to the machines and different modes) perspective.

Results During 40 days, 49 passive cycling sessions and 21 active cycling sessions were completed. Two patients used the MOTOmed every day. Between one and seven patients, out of a total of 18 patients in the unit, were able to use the cyclo-ergometer on any one day. The physiotherapist needed ten minutes to prepare the patient. A nurse was needed to set up and adjust the external ventricular deviation if needed. Each session lasted 30 minutes. The MOTOmed analysed the time using the passive or active mode, the force balance between the two legs and the calories used. The resistance and speed can be modified. The contraindications were: femoral venous or arterial lines, fragile skin, agitation or an acute medical problem. The relative contraindications were: bacterial isolation, external ventricular deviation. Only two side-effects were found: one desaturation and skin lesions.

Conclusion Literature on rehabilitation in neurological intensive care unit is poor. The delivery of cycling in critically ill patients with brain or spinal cord injury is both safe and feasible. Further research is required to confirm and evaluate the efficacy of cycling to prevent muscle weakness, spasticity and functional disorder in this population.

CO19-001-e
Awakening from coma: Assessment and stimulation in a Post-Critical Care Rehabilitation Units (PCCRU)
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Brain injured patients who have suffered a coma require important medical supervision with a coordinated program of rehabilitation and are most likely to benefit from Post-Critical Care Rehabilitation Units (PCCRU). For these patients, an important challenge is to recognize signs of awareness beyond