

Category :**Brain: Neurologic disease**

**A230 - Treatment of upper limb spasticity in patients with chronic disorders of consciousness using continuous brachial plexus block. case series.**

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### **Introduction:**

Spasticity in disorders of consciousness (DOC) is mainly severe, and causes increasing of nociception, impairs physical therapy and care as well as rehabilitation prognosis in general [1]. It is especially likely to happen in patients who suffer spasticity in the upper limbs. Managing spasticity could positively impact neurological status. A regional blockade of the upper limb causes anesthesia and muscular relaxation in relevant zones. That potentially can be beneficial during spasticity treatment, especially physical therapy, which can cause pain and increasing of muscular hypertonicity itself.

### **Methods:**

Four patients with chronic DOC after local ethics committee approval received treatment of spasticity added by continuous brachial plexus block combined with the upper limb periodical immobilization via plaster splint in as far as possible extended position. All the patients had been assessed initially, then during treatment and at the discharge with Coma Recovery Scale-Revised (CRS-R), Modified Ashworth Scale (MAS), Nociception Coma Scale-Revised (NCS-R), as well as passive range of movements in elbow joints were measured.

### **Results:**

There was among all the patients increased passive range of movements in elbow joints (10-40°), decreased intensity of spasticity (2 MAS comparing with 3-4 before treatment), nobody had pain level above 1 NCSR during physical therapy (initially they had 3-4). One patient's neurological status improved after treatment (assessed using CRS-R). There were no complications.

### **Conclusion:**

Method can be beneficial while treating spasticity in DOC. Further studies are needed.

### **References:**

Aurore Thibaut et al. Brain Injury. 27(10):1093-105, 2015