

THERAPEUTIC RESULTS OF MOTOR CORTEX STIMULATION FOR POST-STROKE PARESIS AT HIROSHIMA UNIVERSITY HOSPITAL

K. KURISU, T. SAKOGUCHI, S. OHBA, S. SAKAMOTO, S. TAKESHITA, K. IIDA, Y. KIURA, K. ARITA

Department of Neurosurgery, Hiroshima University Hospital
1-2-3 Kasumi, Minami-ku, Hiroshima, 734-8551, JAPAN

Purpose: To intractable neuropathic pain (NP) as a residual symptom after stroke it has been reported to stimulate several sites of spine, cerebral cortex and deep cerebrum. On the other hand, recently it was reported that electric stimuli to the paretic limbs after stroke and magnetic stimuli to the motor cortex improved paresis of limbs. The authors report the clinical effect of motor cortex stimulation (MCS) to hemiparesis after stroke in Hiroshima University Hospital (HUH). Materials, methods and results: We analyzed 26 patients who underwent MCS to NP from 1993 to 2004. No complication was observed. More than 40% decrease of visual analogue scale (VAS) was noted in 18 cases in 26 one month and in 11 cases of 18 twenty four months after operation, respectively. Brunnstrom stages (BS) were compared before and after MCS in the power of upper(U/E) and lower extremities(L/E) and fingers. Four of 18 cases in U/E and 1 of 18 in L/E showed the improvement of BS, but no in fingers. Movement speed was increased in the limbs which showed the improvement of BS. NP was improved in all cases of which BS were improved in U/E and L/E. Conclusions: MCS is relatively less invasive and showed high effectiveness to NP. MCS is useful not only to NP, but also to spastic paresis after stroke.