Antibodies against the neurite growth inhibitor Nogo-A enhance functional recovery after acute spinal cord injury; results from a clinical Phase II trial

Antibodies which neuralize the growth and regeneration inhibitory activity of the CNS membrane protein Nogo-A were applied by repeated intrathecal injections to patients with acute traumatic cervical spinal cord injury in a multicentric European clinical study (NISCI study). Six months after injury, arm-hand function (upper extremity motor score) and quality of life measures (SCIM self care and SCIM mobility) were significantly higher in motor-incomplete patients treated with antibodies as compared to placebo treated patients. The results confirm earlier studies in rodents and non-human primates and indicate that enhanced recovery of function after CNS injury, possibly by enhancement of nerve fiber growth and regeneration, can be achieved in human patients.