BRAIN AND SPINAL CORD AFFECTED BY AMYOTROPHIC LATERAL SCLEROSIS
INDUCE DIFFERENT GROWTH FACTORS EXPRESSION PATTERNS IN NEURAL AND MESENCHYMAL RAT STEM CELLS

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Amyotrophic lateral sclerosis (ALS) is a neurodegenerative disease characterized by selective loss of motor neurons and death caused by paralysis. A modern therapeutic concept includes transplantation of stem cells with the aim to slow down progression of disease (Mitrecic et al, Anat Record 2009; Mitrecic et al, Cell Transpl 2010).

Here we report that neural and mesenchymal stem cells stimulated by ALS-affected tissue respond by specific increase or decrease in production of various growth factors.

Conclusions:

a) inherent characteristics of different (stem) cell populations define their healing potential.

b) different response of stem cells obtained by their stimulation with either brain or spinal cord suggests differences in pathological process during the onset and progression of ALS in these two regions of the central nervous system.

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