

ESWT in Neurology - Where are we in 2023

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There's an increasing number of neurological indications, where extracorporeal shockwave therapy (ESWT) should be considered. The mechanisms of ESWT action is very complex and depends on treated structures. In peripheral nerves, there is increasing evidence in ESWT efficacy on carpal tunnel syndrome and associated compressional neuropathies. According to ESWT effects on nerve remyelination and both synaptic and non-synaptical neuroplasticity, ESWT induced mechanotransduction may play its future role in treating another nerve pathologies including polyneuropathy, spasticity, nerve injuries or, possibly, in near future, also in spinal cord trauma. Significant effect of ESWT was also proven in neurodegeneration, namely in Alzheimer´s disease, whose prevalence is growing at an alarming pace. This completely new field of ESWT application, the Transcranial Pulse Stimulation, combining transcranial shockwave delivery with MRI navigation, has not only significant effect on cognitive scores and associated affective disorders, but also brings more light on physical treatment in AD and other types of neurodegeneration.