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Writer's Cramp- another indication of Riluzole (an anti ALS drug) and Can we learn from the utility of such models?

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Models of human disease have long been used to understand the basic pathophysiology of disease and to facilitate the discovery of new therapeutics. However, as long as models have been used there have been debates about the utility of these models and their ability to mimic clinical disease at the phenotypic level. The current study is focused on the way the utility of underlying molecular mechanism can be transgressed to applied therapeutics.

Classic writer's cramp is best characterized as a focal dystonia, incoordination, cramping, and aching of the hand with task-specific movements. The hand assumes a semiflexed position of the fingers with possible hyperextension of the fingers and hyperflexion or extension of the wrist with supination or pronation and electromyographic studies reveal a characteristic pattern of co-contraction of the agonist and antagonist muscles of the forearm and hand. The diagnosis of Writer's cramp, a form of task-specific focal dystonia, is therefore quite a straightforward process but the treatment is difficult and therapies are unsatisfactory. There is no available treatment to stop or reverse its progressive course. Some research suggests that the excitatory amino acid neurotransmitter glutamate may be involved in the pathogenesis. Riluzole [2-amino-6(trifluoromethoxy) benzothiazole], an anti-ALS drug, which has clearly showed the neuroprotective effect as well and blocks the presynaptic release of glutamate and its inhibition of spontaneous excitability and Ca^{2+} signaling. We report a case of treatment resistant writer's cramp who has dramatically responded to riluzole at dose of 50 mg per day by week 8, relapsed when riluzole was stopped and again improved with restarting of the riluzole, illustrating an experimental but novel indication of riluzole which might provide a basis for future treatment. To conclude, the effectiveness of this intervention must be treated cautiously and requires verification in further experimental trials.

Biography

Praveen Khairkar, MD underwent his basic and higher specialist (Junior and Senior Residency) training in Psychiatry from the Postgraduate Institute of Medical Education and Research, Chandigarh, India. He obtained his master's degree in Medical Biostatistics and Clinical Research from Punjab University with merit. Thereafter he joined as Assistant Professor in June 2006 at DMIMS, Wardha, nationally accredited 'A grade' deemed university and set up the psychiatric department independently. He became the youngest fellow of Indian Psychiatric Society, Postgraduate guide and associate professor in country in 2010. He has published more than 30 articles mostly in American, European, Canadian journals in last five years and serves as reviewer in two prestigious European Journals in the field of neurology and neuroscience (Pediatric Neurology, Journal of Neuroscience in Rural Practice) and on editorial board of Journal of MGIMS. He has presented 27 scientific papers national and International conferences and called as invited speaker in 11 International/World conferences of psychiatry, neuroscience and neurology held worldwide so far. Some of them included Indo-US Neuroscience Conference, World Neuro-Talk, World Neuroscience, WPA, SOPHIE, WSEAS and OMICS conferences. He has worked in collaboration with ICMR, IPS, WHO, USAIDS, WSEAS, Centre of Neuroscience, California, USA, and NIMHANS Bangalore and had undertaken 12 institutional intramural and extramural collaborative projects so far. He had been invited by National University of Malaysia, Penang Malaysia in March 2010. He was the only Indian in the 10 best scientific paper award acclaimed in 19th European Congress of Psychiatry held in Vienna, Austria in March 2011. He was an invited guest faculty to speak on "utility and validity of sampling methods in biomedical and bioengineering sciences" at International conference of "Biostatistics and Biometrics" held at Omaha, Nebraska, USA, March 5th to 7th 2012. He loves teaching and his area of research is Neuropsychiatry, Adult Psychiatry, Consultation-Liaison Psychiatry, and Neurobiology.

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