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Role of fluoxetine in pharmacological enhancement of motor functions in stroke patients: A randomized, placebo-controlled, single-blind trial

Objectives: The current study was designed to evaluate the effectiveness of fluoxetine in motor recovery and its safety in stroke population with more severe motor deficit for a period of 90 days.

Scope: Stroke is the primary cause of disability worldwide, the second most common cause of dementia and the third leading cause of death. Only few studies were conducted to study the role of fluoxetine in motor recovery in either ischemic or hemorrhagic stroke patients with probably less severe paresis

Methods: Patients who had acute or subacute stroke with hemiparesis and aged between 18 and 80 years with medical research council (MRC) scale score <4 were included in this randomized, Single-blind, placebo-controlled trial in 1:1 ratio to placebo or fluoxetine 20 mg/day orally for 90 days. The primary outcome measures were changes in barthel index, time taken to complete nine hole peg test and number of hand tapping movements in 30 seconds by the affected limb between baseline, 45th day and 90th day.

Results: A total of 168 patients were assigned to fluoxetine ($n = 84$) or placebo ($n = 84$) group. Mean BI score significantly improved at 90th day in fluoxetine group (70.42 ± 10.56) than in placebo group (44.23 ± 8.52). Mean dexterity value decreased significantly at 90th day (2.61 ± 0.81) compared to baseline (3.98 ± 0.53) in fluoxetine group. However higher rate of decrease of mean dexterity value was seen in fluoxetine group when compared to placebo group. Mean number of hands tapping movements in 30 second increased significantly at 90th day (16.33 ± 3.58) compared to baseline (9.83 ± 2.92) in fluoxetine group. Few ADR reported during this study were dizziness, drowsiness, and insomnia.

Conclusion: Early prescription of fluoxetine is safe and may enhance motor function in patients presenting with severe motor impairments after stroke.

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Biography

Karthickeyan Krishnan, completed his UG degree in 2006 and PG degree in Pharmacy Practice Specialization in the year 2008 under the affiliation of the Tamil Nadu Dr. M.G.R. Medical University, Chennai, India and passed in First class with Distinction and he received Gold Medal for securing First place in PG degree. He won many Prizes and Certificates in both curricular and extra-curricular activities. He completed his MBA degree in Hospital Management in the year 2007 and completed his Post Graduate Diploma in Clinical Research course with First class in the year 2010. He completed his Ph.D., degree in Faculty of Pharmacy in the year 2018.