

The efficacy of botulinum toxin A lower limb injections in addition to physiotherapy approaches in children with cerebral palsy: A systematic review

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Abstract: BACKGROUND: To assess treatment effect of lower limb botulinum toxin type A (BTX-A) in combination with physiotherapy approaches on gross motor functions in children with cerebral palsy compared with only physiotherapy treatment. OBJECTIVE: The purpose of this review was to analyze the efficacy botulinum toxin a lower limb injections in addition to physiotherapy approaches in children with cerebral palsy. METHODS: A literature search was conducted in the following databases: Cochrane, PEDro, PubMed, MEDLINE, AMED and EMBASE. The searches were limited to the period from July 2009 to July 2015. The intervention had to contain BTX-A into the lower limb plus physiotherapy approaches and be compared with only physiotherapy. The methodological quality and clinical relevance were independently assessed by the authors. RESULTS: The database search resulted in a total of 1521 studies, of which 4 (Level II of evidence) trials were included in this review. The population represented by were age between from 11 month to 15 years. Overall there were 153 children all diagnosed with CP (87 Male, 66 Female). CONCLUSIONS: The use of BTX-A injections in addition to physiotherapy approaches seems to have positive effect on spasticity and ROM. However, the question of whether the treatment of BTX-A

plus physiotherapy has a greater improvement on functional capacity, such as gross motor function or gait parameter than only physiotherapy treatments, was inconclusive. Further investigation by rigorous studies is required.

Keywords: Physiotherapy, cerebral palsy, botulinum toxin type A, GMFCS, GMFM

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