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RESEARCH ARTICLE

# Treating Congenital Hypotonia with Exosomes: A Case Study

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OPEN ACCESS

**Citation:** Miller R. (2019). Treating Congenital Hypotonia with Exosomes: A Case Study. Proc ACIM Res.1(2):1-2.

**Editor:** Mark Tommerdahl, Ph.D.

**Received:** October 27, 2019

**Accepted:** November 6, 2019

**Published:** November 8, 2019

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**Data Availability Statement:** All relevant data are within the paper and its Supporting Information files.

## Introduction

Hypotonia, or poor muscle tone, is usually detected at birth or during infancy. An infant with hypotonia may appear limp at birth and not able to keep their knees and elbows bent. An infant with Hypotonia may present with developmental delay such as failing to meet gross motor milestones for sitting, standing and walking; inability to walk on heels; flat feet when standing; difficulty feeding/inability to suck. The disorder itself can be easily recognizable as it affects muscle strength, and the brain, however, diagnosing the cause can be challenging. Possibilities could include injury, illness, an inherited condition, cerebral palsy, brain damage caused by lack of oxygen at birth or muscular dystrophy.

## Case Presentation

We present a case of a 19 month female twin diagnosed with congenital hypotonia. She was evaluated by a pediatric neurologist and had a normal MRI. The patient received months of physical therapy and speech therapy but continued to show a delay in walking, talking and at 19 months still suffered from severe hypotonia. On February 12, 2019 the patient received 4.8 ml of Kimera exosomes IV and 0.2 ml of Kimera exosomes intranasal. On February 14, 2019 the patient received .2 ml of Invitrx cord tissue intranasal and 0.8 ml Invitrx IM. Fourteen days later, on February 28, 2019, the patient spoke her first words. On March 14, 2019 a video was presented of the patient taking her first steps. On April 14, 2019 the patient received a second dose of Stemell exosomes at 3.8 ml IV and 0.2 Stemell exosomes intranasal. Two days later, on April 16, 2019, a video was presented of the patient running around and chasing her sister in a restaurant. On May 3, 2019 a video was presented of the patient climbing a ladder to go down a slide saying “Mimi, watch me.” The patient continues to walk, run, climb and talk without difficulty and has become fiercely independent. The patient’s speech therapist stopped seeing her after two months as her speech has caught up. Her physical therapist has reduced patient visits from once a week to once a month to keep an eye on her core strength

## Conclusions

The results of this study suggest that exosomes administered both intranasal and intravenous can play a crucial role in the improvement of developmental delays associated with congenital hypotonia. The patient presented with severe developmental delays and within 16 days of exosome administration, extreme

improvements were noted.  While the treatment plan would be determined by possible cause, this study reaffirms the need to make use of exosomes as a treatment option for congenital hypotonia. Exosomes appear to play a critical role in resolving the hypotonia symptoms, allowing the patient to grow and develop normally.