

# Botox for newborns

March 17 2008

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Botulinum toxin, also called Botox, is best known as one of the most commonly used molecules to reduce wrinkles. It is also known as one of the most poisonous naturally occurring substances.

Now, thanks to Dr. Sam Daniel, Associate Director of Research of the Otorhinolaryngology Division at the Montreal Children's Hospital of the McGill University Health Centre, this protein has become an effective method to save newborns suffering from CHARGE Syndrome from having to undergo devastating tracheotomies. Dr. Daniel describes the case of the first infant patient treated with the toxin in an article from the *Archives of Otolaryngology* dated March 17th.

CHARGE Syndrome is rare, but it can become life-threatening in its most severe form. The syndrome includes a variety of birth defects in different organs, such as the heart, eyes or ears, but it also affects the salivary glands. They are hyper-stimulated and secrete excessive fluids that are discarded into the lungs, causing asphyxia. This was the case for the patient that Dr. Daniel discusses in his article: at the age of two and a half months, little Franck (not his real name) was still unable to breathe without assistance and a tracheotomy seemed inevitable in order to relieve his respiratory system.

Seeing the despair of Franck's parents, Dr. Daniel proposed an experimental treatment as a last recourse: the injection of a minute dose of Botox into each of Franck's salivary glands. This had never been done before on such a young child, but no other option could prevent permanent intubation. Two weeks after the injections, Franck's

extubation was a success. He now leads the normal life of a three-year-old boy at home with his parents.

Botulinum toxin is a very powerful neurotoxin, meaning that it blocks nerve activity. In Franck's case, it blocked the nerves that stimulated his salivary glands thereby reducing their secretions to a normal level. The infant then needed repeated injections every four to six months for one and a half years until his glands shrunk and stopped overproducing saliva.

Since this first attempt 5 years ago, Dr. Daniel has performed over 1000 Botox injections in young children including 12 in newborns. "This treatment is extremely effective, and to date I have not encountered any major side effects despite the bad press Botox got recently. It also helps us considerably improve the lives of our patients," he explained.

Source: McGill University

Citation: Botox for newborns (2008, March 17) retrieved 2 May 2024 from <https://medicalxpress.com/news/2008-03-botox-newborns.html>

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