NAPA MEDICAL
RESEARCH FOUNDATION

Advancing research and discovering new treatments to improve movement and function

Can Ultrasound Guidance Save Patients Money?

Comments by Dr. Marko Bodor

While many readers will associate botulinum toxin (Botox) injections with its cosmetic application to smooth wrinkles in the face, most are not aware that the original development for the drug was to correct spastic muscle disorders, specifically for strabismus, or deviation of the eye, caused by an imbalance in pull of the muscles.

Today the primary medical use of botulinum toxin is to reduce spasticity and correct muscle imbalance in a variety of neurological disorders, from Parkinson's disease and post-stroke hemiplegia to cervical (torticollis) and writer's or musician's cramp (focal dystonias).

Dr. Bodor recently published a paper in *Muscle & Nerve* explaining why several parts of an affected muscle need to be injected to optimize its effect.

At a cost ranging from $400-1000 per treatment session with Botox, any methods that could be used to improve the efficacy of the drug and reduce its dose per patient, when applied to the overall patient population using Botox, would result in a significant savings to the healthcare system. Botulinum toxins are a multi-billion dollar industry, expected to exceed $5.6 billion by 2020.

Dr. Bodor has been using Botox in his practice to treat muscle and nerve disorders since 1995. He believes physicians can optimize the efficacy of Botox injections using ultrasound imaging guidance in addition to current EMG (electrical signal) guided techniques. Dr. Bodor says, "Every muscle has muscle fibers and each fiber has a neuromuscular junction, but the fibers do not run up and down the entire length of the muscle in each muscle. Ultrasound enables the physician to see the exact architecture of each muscle and ensure that toxin spreads throughout all of the fibers, ensuring the best possible response."

Consider for a moment that reducing the overall toxin dose by only 20% for every patient treated would translate into a savings of $1.12 billion. Our healthcare system could benefit greatly from cost savings measures like these, not to mention improved outcomes among patients.

Thanks to Dr. Bodor and his team, the Napa Medical Research Foundation is working towards our goal of providing less costly, less invasive treatments to our local population and of sharing these treatments with the broad medical community.

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