

Contents lists available at ScienceDirect

## Journal of Pediatric Surgery

journal homepage: www.elsevier.com/locate/jpedsurg



## Difficulties classifying myasthenia gravis in the pediatric surgical literature



Dear Dr. Holcomb,

We read with interest the manuscript by Derderian et al. [1], and we support their enthusiasm for thymectomy for myasthenia gravis (MG), particularly with respect to minimally invasive techniques. However, we write to register our disappointment with their use of Osserman staging and deFilippi treatment classification, both of which are qualitative in nature and should not be mainstays of contemporary MG literature.

The fluctuating extent and severity of MG have historically made classification difficult. The traditional Osserman's and deFillippi's criteria for grading of severity and postoperative response rely heavily on subjective clinical assessments of "mild," "moderate," and "severe" disease, and cannot account for variations in immunosuppression or neuromuscular blockade. To that end, the Myasthenia Gravis Foundation of America (MGFA) published research standards in 2000 [2], which have been successfully used in the surgical literature [3].

Truly, the MGFA standards have not been validated in children, though there have been suggested modifications for children [4]. Nevertheless, the variability between publications precludes meta-analysis and has discouraged large trials in children. Standardization of objective, validated outcome measures in pediatric myasthenia gravis is certainly needed [5], and we implore future groups to collaborate in development of such measures as expeditiously as possible.

Seth D. Goldstein\*
Ann & Robert H. Lurie Children's Hospital of Chicago, 225 E. Chicago
Avenue, Box 63, Chicago, IL 60611-2605
Northwestern University Feinberg School of Medicine, 225 E. Chicago

\*Corresponding author at: Ann & Robert H. Lurie Children's Hospital of Chicago, 225 E. Chicago Avenue, Box 63, Chicago, Illinois 60611-2605. Tel.: +1 312 227 4210; fax: +1 312 227 9678

E-mail address: sdgoldstein@luriechildrens.org

URL: http://www.luriechildrens.org/en/doctors/goldstein-seth-d/

Nancy L Kuntz<sup>1</sup>

Mazza Foundation Neuromuscular Disorders Program, 225 East Chicago Avenue, Box 51, Chicago, IL 60611-2605

Ann Robert H. Lurie Children's Hospital of Chicago, 225 E. Chicago Avenue, Box 63, Chicago, IL 60611-2605

Northwestern University Feinberg School of Medicine, 225 E. Chicago Avenue, Box 63, Chicago, IL 60611-2605

E-mail address: nkuntz@luriechildrens.org

https://doi.org/10.1016/j.jpedsurg.2020.03.033

## References

- Derderian SC, Potter DD, Bansal S, et al. Open versus thoracoscopic thymectomy for juvenile myasthenia gravis. J Pediatr Surg 2019;35(5):603–10.
- [2] Jaretzki III A, Barohn RJ, Ernstoff RM, et al. Myasthenia gravis: recommendations for clinical research standards. Ann Thorac Surg 2000;70(1):327–34.
- [3] Goldstein SD, Yang SC. Assessment of robotic thymectomy using the Myasthenia Gravis Foundation of America guidelines. Ann Thorac Surg 2010 Apr;89(4):1080–5 [discussion 1085-6].
- [4] Goldstein SD, Culbertson NT, Garrett D, et al. Thymectomy for myasthenia gravis in children: a comparison of open and thoracoscopic approaches. J Pediatr Surg 2015 Jan;50(1):92–7.
- [5] Sanders DB, Wolfe GI, Benatar M, et al. International consensus guidance for management of myasthenia gravis: executive summary. Neurology 2016 Jul 26;87(4): 419–25.

<sup>&</sup>lt;sup>1</sup> Tel.: +1 312 227 4637; fax: +1 312 227 9642.