

Interpretation of intraoperative neuromonitoring during thyroid surgery from INMSG experts

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In recent years, there has been some continuous improvement of intraoperative neuromonitoring (IONM) during thyroid surgery. From fast positioning and precisely dissociating nerves, to real-time monitoring neural functions and warning of early damage, to analysis of the mechanism of neural injury, IONM has been an effective way to protect recurrent laryngeal nerve (RLN). What's the importance of IONM? Should we choose continuous intraoperative neuromonitoring (CIONM) or intermittent intraoperative neuromonitoring (IIONM)? Are there any updates in the anatomy of superior laryngeal nerve (SLN), RLN and vagus nerve (VN)? How to deal with the problems during neural monitoring?

With great honor and pleasure, *Gland Surgery (GS)* has invited Prof. Henning Dralle and Prof. Gianlorenzo Dionigi, members of International Neural Monitoring Study Group (INMSG), to share with us their opinions above the questions from their perspective.

Prof. Henning Dralle (*Figure 1*) since 1994 is Professor of Surgery and Chairman of the Department of Surgery at University of Halle-Wittenberg, Halle/Saale, Germany. Prof. Dralle was President of the German Association of Endocrine Surgeons (CAEK) from 1997–2000, and again from 2006–2009. From 2005 up to 2011 he was President of the German Thyroid Association, and from 2005–2007 he was President of the International Association of Endocrine Surgeons (IAES). In addition, he was Secretary of the European Board of Surgery, Division of Endocrine Surgery (DES), from 1999 to 2007, and the President of the European Society of Endocrine Surgeons (ESES) from 2008 to 2010.

Prof. Dralle has authored more than 620 peer-reviewed publications, and 180 book chapters and review articles, including *New England Journal of Medicine*, *Cancer Research*, *Cancer*, *Journal of Clinical Endocrinology and Metabolism*, *Thyroid*, *Annals of Surgery*, *Surgery*, and *World Journal of Surgery*. The h-index of Professor Dralle is 55. Prof. Dralle's special interest is clinical and translational research of



Figure 1 Prof. Henning Dralle.



Figure 2 Prof. Henning Dralle: significance of intraoperative neuromonitoring (IONM) (1).

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endocrine surgery of the thyroid, parathyroids, adrenals, and gastroenteropancreatic neuroendocrine tumors. *Figure 2* is the interview with Prof. Dralle.

Questions for Prof. Dralle:

(I) Please briefly introduce yourself to our audience;



Figure 3 Prof. Gianlorenzo Dionigi.



Figure 4 Prof. Gianlorenzo Dionigi: challenges for intraoperative neuromonitoring (IONM) (2).

Available online: <http://www.asvide.com/articles/976>

- (II) What's the difference between CIONM and IIONM?
- (III) As an experienced expert in thyroid surgery, what's your opinion on the significance of neural monitoring during thyroid surgery?
- (IV) Finally, could you give a comment to the current development of thyroid surgery in China?

Gianlorenzo Dionigi (*Figure 3*) is Professor of Surgery since 2013. In 2012 he has been appointed for Chairman of the 1st Division of Surgery, University Hospital in Varese, Italy. He is founder and head of the Research Center for Endocrine Surgery at the Department of Surgical Sciences and Human Morphology, School of Medicine, University of Insubria in Varese (Italy) since 2004.

Prof. Dionigi has experience with neural monitoring starting in 2004 of approximately 5,000 cases of intermitted and 500 of continuous IONM. Prof. Dionigi published peer-reviewed publications and book chapters on IONM both on guidelines, technique, experimental, clinical research, cost analysis and learning curve for IONM. He has lead IONM surgical presentations and live "hands-on" surgeries to thyroid surgical units in China, Korea, Taiwan, USA, Brazil, Middle East and Europe. Please refer to *Figure 4* for Prof. Dionigi's talk.

Questions for Prof. Dionigi:

- (I) Please briefly introduce yourself to our audience;
- (II) As you have given an excellent speech about the progress on the anatomy of SLN, RLN, VN, would you please briefly share the main progress with us?
- (III) According to your profound experience, what is the biggest problem to manage neural monitoring

during thyroid surgery? Do you have any suggestions to better deal with this problem?

- (IV) Why did you choose to be a surgeon?

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Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

References

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