



# World class epilepsy care in the heart of Mexico

## *Atención de la epilepsia de clase mundial en el corazón de México*

Imad M Najm\*

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The World Health Organization (WHO) recognizes epilepsy as a serious public health concern with over 50 million people worldwide suffering from the disease. A recent report from the Centers for Disease Control and Prevention (CDC) in the United States (US) recently estimated that up to 56% of adults with epilepsy in the US have uncontrolled seizures.<sup>1</sup> Epilepsy surgery has become an excellent option in children and adult patients with pharmacoresistant epilepsy. For a carefully selected subset of patients with drug-resistant focal epilepsy, surgical resection has been demonstrated to be a more effective treatment option than continued pharmacological therapy.<sup>2</sup> We recently calculated an annual period prevalence of ~50 epilepsy surgical candidates in 100,000 adults and ~15 in 100,000 children and an annual incidence of ~3 epilepsy surgical candidates in 100,000 adults and ~2 in 100,000 children (López-Rivera et al, In Press).

This special issue of *Anales Médicos* is a timely review of the current state of epilepsy care in Mexico and Latin America. As reviewed in this issue, epilepsy is more prevalent in Mexico and Latin America as compared to the US with the prevalence of epilepsy in Mexico estimated to be between 3.9 and 42.2 per 1,000 inhabitants.

The success of epilepsy surgery depends on four interconnected and interdependent pillars. 1) A multidisciplinary team approach, 2) state of the art technologies, 3) innovation, and 4) measurable outcomes. An epilepsy surgery program is as strong as its weakest link.

The seminal articles in this review illustrate the developing leadership role that the Epilepsy Center at ABC Hospital has recently assumed in epilepsy surgery in Mexico. ABC hospital has been able to build a truly multidisciplinary approach with neurologists, neurophysiologists, neurosurgeons, neuroradiologists, neuropsychologists and bioethicists all working together to care for patients of all ages with epilepsy. The role of electroencephalography (EEG), high definition structural and functional imaging, as well as neuropsychological assessment, in positively affecting surgical outcomes is highlighted by the ABC team. In response to the current pandemic, the EEG has been used for the management of COVID-19 patients. One of the main indicators of a mature and comprehensive epilepsy surgery program is the presence of a bioethics team. This is nicely illustrated in the enclosed manuscript on «bioethics and epilepsy».

The contribution of state of the art technologies to the success of epilepsy surgery is illustrated in many of this issue's manuscripts and reviews.

Innovation is a fundamental pillar in the continued success and the future of any epilepsy program. This is highlighted in the report by de Font-Réaulx and colleagues from the ABC Epilepsy Center. In this report, the authors an innovative approach for the *in situ* measurement of cortical temperature and its correlation with chronicity of

\* Director del Centro de Epilepsia. Cleveland Clinic Foundation.

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Correspondencia: **Imad M Najm**

Clinica de Epilepsia, Cleveland Clinic Foundation. Cleveland, OH, EUA.

E-mail: [najmi@ccf.org](mailto:najmi@ccf.org)



epilepsy. This method holds promises beyond the simple measurement of cortical temperature, as it may potentially serve as an important intraoperative tool for the localization and the definition of extent of the epileptogenic zone.

Last but not least, the best validation of the success of any epilepsy surgery program is the reporting of outcomes on seizure control. The ABC program's results reported in this issue are above the national and international averages for a patient population of children and adults.

As an old friend to many colleagues involved in the care of patients with epilepsy in Mexico, I had the personal privilege and the honor to be a close witness to this transformation since the

inauguration of the ABC Hospital campus in Santa Fe in October 2004. This has been a personally rewarding experience, but its greatest benefit been to the patients of all ages who suffer from epilepsy in Mexico and Central America.

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