



Hospital Público Materno Infantil
Sociedad del Estado



GOBIERNO DE LA PROVINCIA DE SALTA
Ministerio de Salud Pública



Epilepsia: Actualización en Epilepsia?

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Epilepsia: temas a desarrollar

- Definición epilepsia ILAE 2014
- Orientación clínica
- Clasificación epilepsia ILAE 2017
- Diagnóstico

Relevancia a la presentación electro-clínica

Importancia de la Genética y nuevos estudios (identificando características electro-clínicas y su confirmación genética)

- Tratamiento
- DAE
- Tratamientos alternativos



Epilepsia: definición

- **Crisis epilépticas:** aparición transitoria de síntomas y signos provocados por una actividad neuronal anómala y excesiva o simultánea en el cerebro.
- **Definición de Epilepsia:** es un trastorno cerebral que se caracteriza por una predisposición crónica a crisis epilépticas y por las consecuencias neurobiológica, cognitivas, psicológicas y sociales de esta enfermedad.

Epilepsia: definición

A practical clinical definition of epilepsy

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SUMMARY

Epilepsy was defined conceptually in 2005 as a disorder of the brain characterized by an enduring predisposition to generate epileptic seizures. This definition is usually practically applied as having two unprovoked seizures >24 h apart. The International League Against Epilepsy (ILAE) accepted recommendations of a task force altering the practical definition for special circumstances that do not meet the two-unprovoked seizures criteria. The task force proposed that epilepsy be considered to be a disease of the brain defined by any of the following conditions: (1) At least two unprovoked (or reflex) seizures occurring >24 h apart; (2) one unprovoked (or reflex) seizure and a probability of further seizures similar to the general recurrence risk (at least 60%) after two unprovoked seizures, occurring over the next 10 years; (3) diagnosis of an epilepsy syndrome. Epilepsy is considered to be resolved for individuals who either had an age-dependent epilepsy syndrome but are now past the applicable age or who have remained seizure-free for the last 10 years and off antiepileptic medications for at least the last 5 years. "Resolved" is not necessarily identical to the conventional view of "remission or cure." Different practical definitions may be derived and used for various specific purposes. This revised definition of epilepsy brings the term in concordance with common use.

KEY WORDS: Epilepsy, Seizure, Definition, Unprovoked, Recurrence.



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- 2 crisis no provocadas separadas por más de 24 h
- Una crisis en el contexto de un síndrome epiléptico
- Una crisis no provocada (o refleja) y probabilidad de que aparezcan más crisis durante los 10 años siguientes similar al riesgo de recurrencia general (al menos el 60% después de 2 crisis no provocadas).

Epilepsia: enfoque clínico

- Convulsión sintomática: Debido a un insulto agudo del SNC de causa intracerebral o extracerebral
- Epilepsia sintomática: Debido a lesión cerebral
- Epilepsia idiopática: Reúne criterios clínico- EEG definidos de probable origen genético
- Epilepsia criptogénica: de origen oculto (después probablemente sintomática)

Epilepsia: enfoque clínico

CONVULSION
AGUDA
SINTOMATICA

TCE
Hipoglucemia
Meningitis aguda
Etc.

EPILEPSIA

IDIOPATICA

SINTOMÁTICA

PROBABLEMENTE
SINTOMATICA

- Genética
- Desarrollo normal
- Examen neurológico N
- TAC-RMN N
- EEG característico

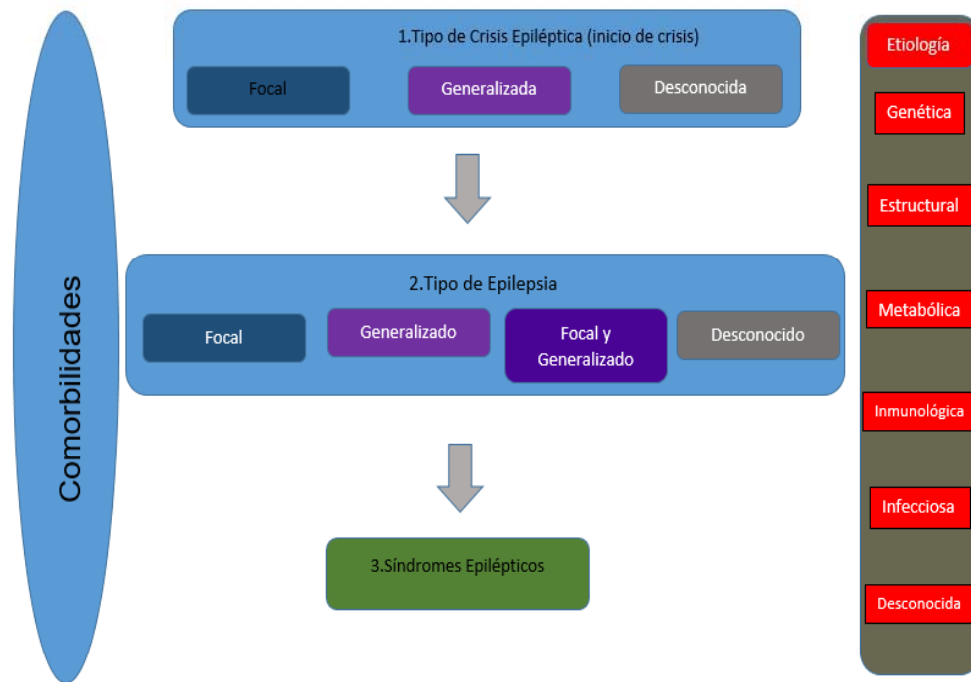
- Secundaria (insulto SNC)
- Antecedentes Personales y/o Examen neurológico y/o TAC-RMN anormal

- Origen oculto. Secundaria a una lesión no demostrable
- (Antec-Imágenes)
- Se sospecha una lesión por evolución o por forma de presentación

Epilepsia: Clasificación de ILAE 2016, 2017



Figura 2. Esquema para la Clasificación de las epilepsias (2017)



Scheffer IE et al. ILAE classification of the epilepsies: Position of the ILAE Commission for Classification and Terminology. *Epilepsia* 2017; 1-10

Clasificación Epilepsia: Aplicación y utilidad HPMI (Salta)

- **Objetivo**

Analizar la aplicación y utilidad clínica de la Nueva Clasificación de Epilepsia de la ILAE, usando los nuevos conceptos y el nuevo marco de diagnóstico de esta propuesta en el Hospital Público Materno Infantil de Salta.

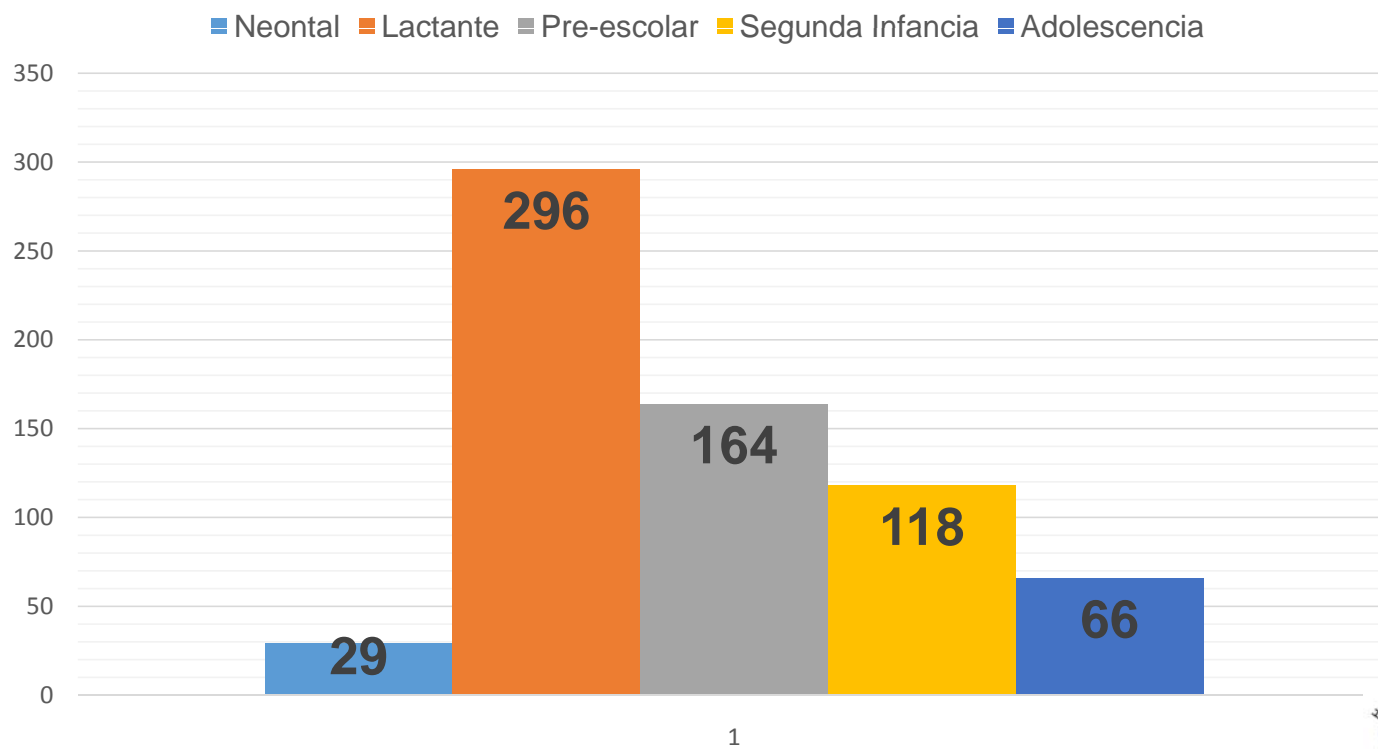
Material y Métodos

- Estudio Prospectivo
- Se evaluaron 673 pacientes entre 1 agosto 2016 a 31 julio 2017
- Se analizaron todos los pacientes que concurrieron consecutivamente al control, en consultorio externo, emergencia y hospitalización HPMI.
- Criterios diagnósticos de epilepsia de acuerdo a definición de Fischer
- Clasificar de acuerdo a Clasificación multinivel de Scheffer, 2016, 2017

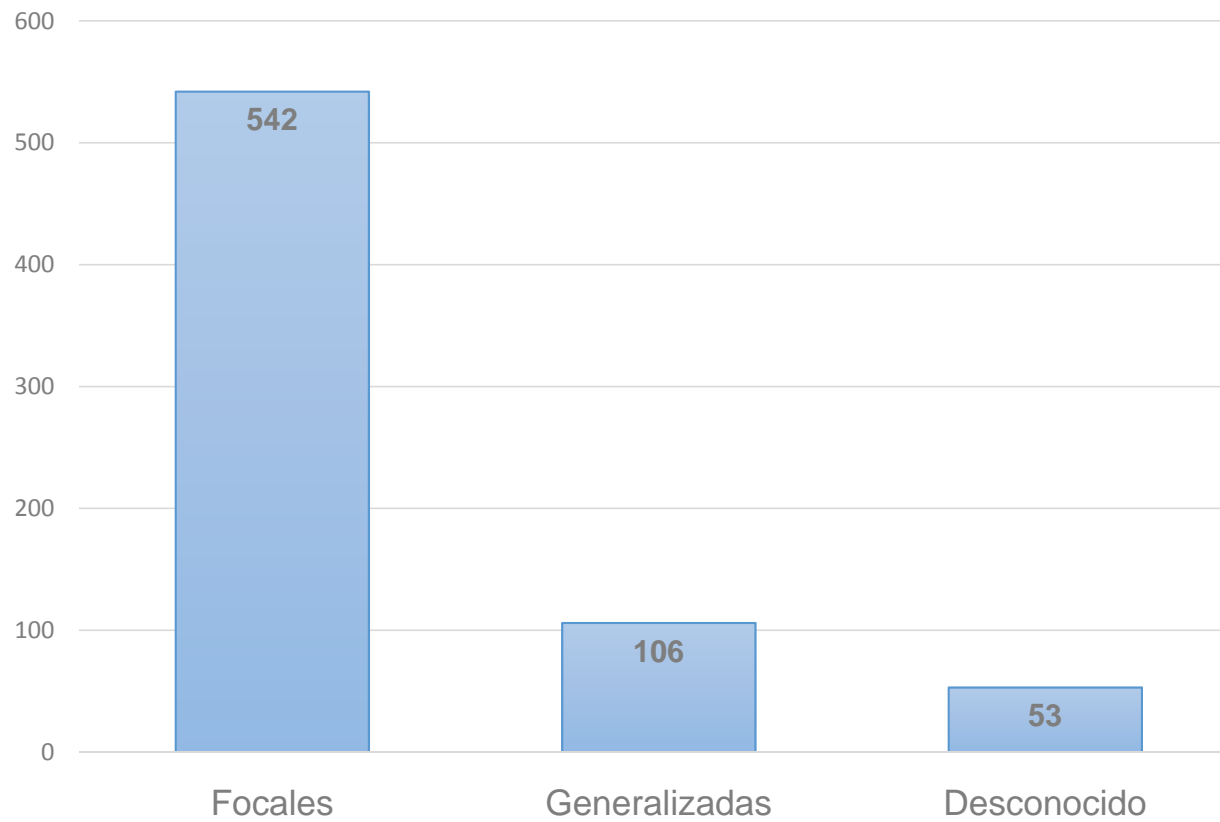
Resultados

- 569/673 (85,5%) se pudo identificar el Síndrome epiléptico o Etiología de la Epilepsia
- Epilepsia con Etiología: 389 casos (58%)
- Etiología Desconocida: 284 casos (42%)
- En 377 (56%) se reconoció el Síndrome Epiléptico, de los cuales 180 (47.5%) tenían etiología desconocida

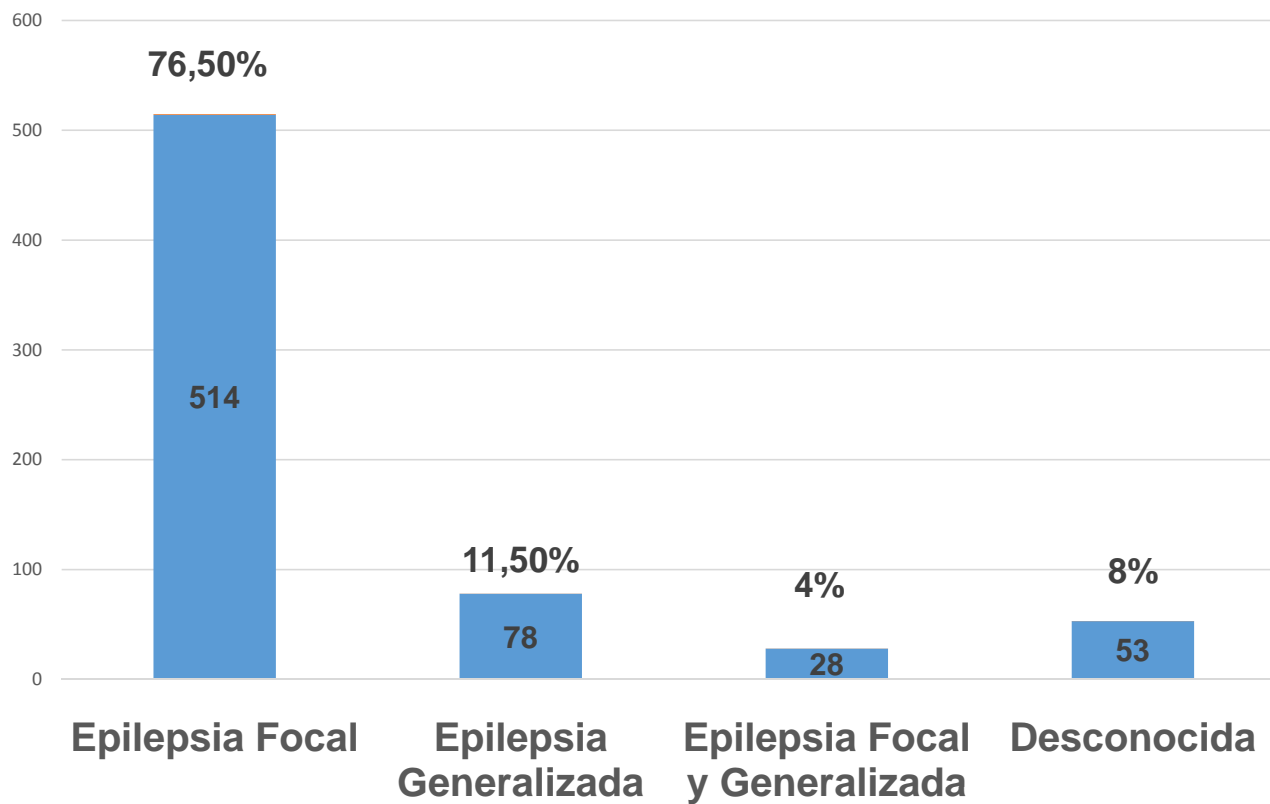
Edad Inicio Epilepsia



Tipo de crisis epiléptica

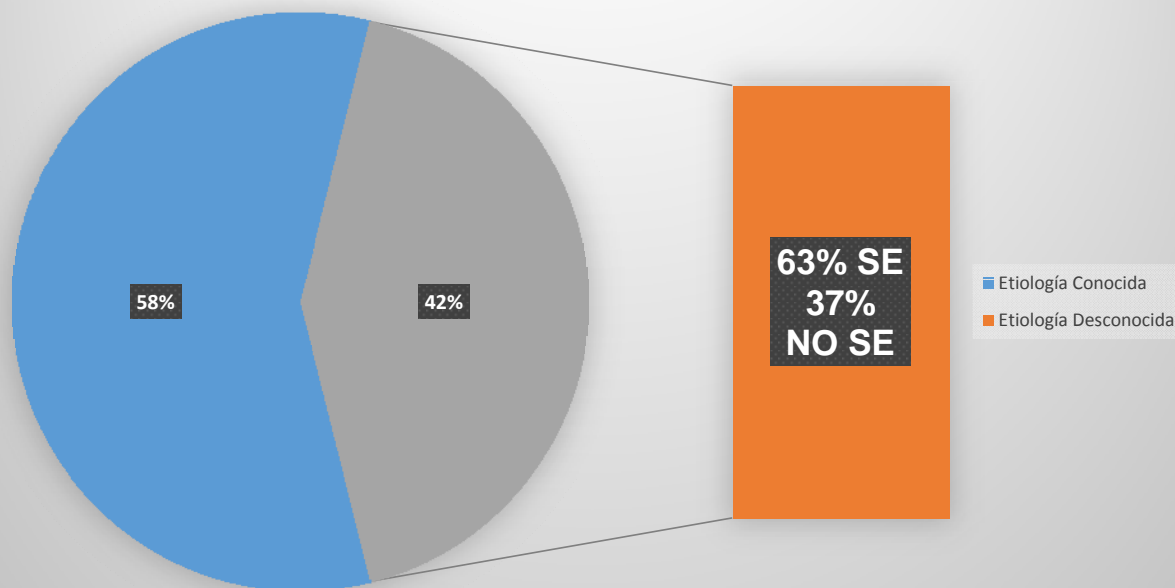


Tipo de Epilepsia

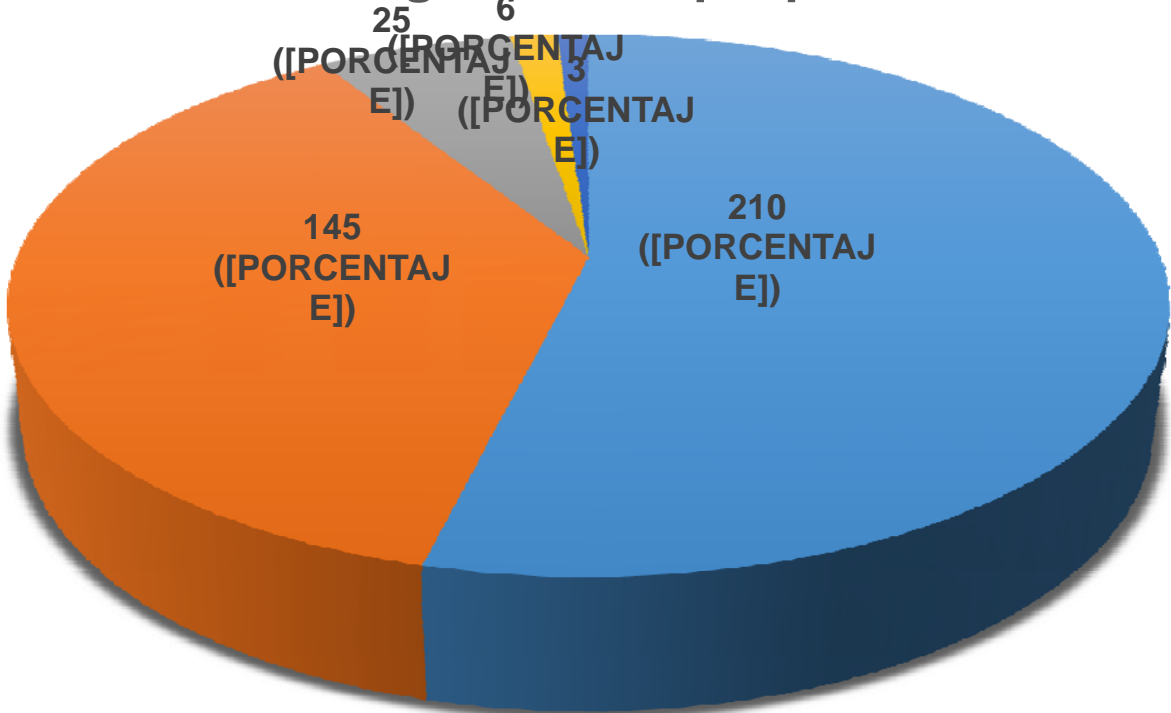


- **104/673 (15.5%) casos solo se llego a este nivel**

Etiología de la Epilepsia



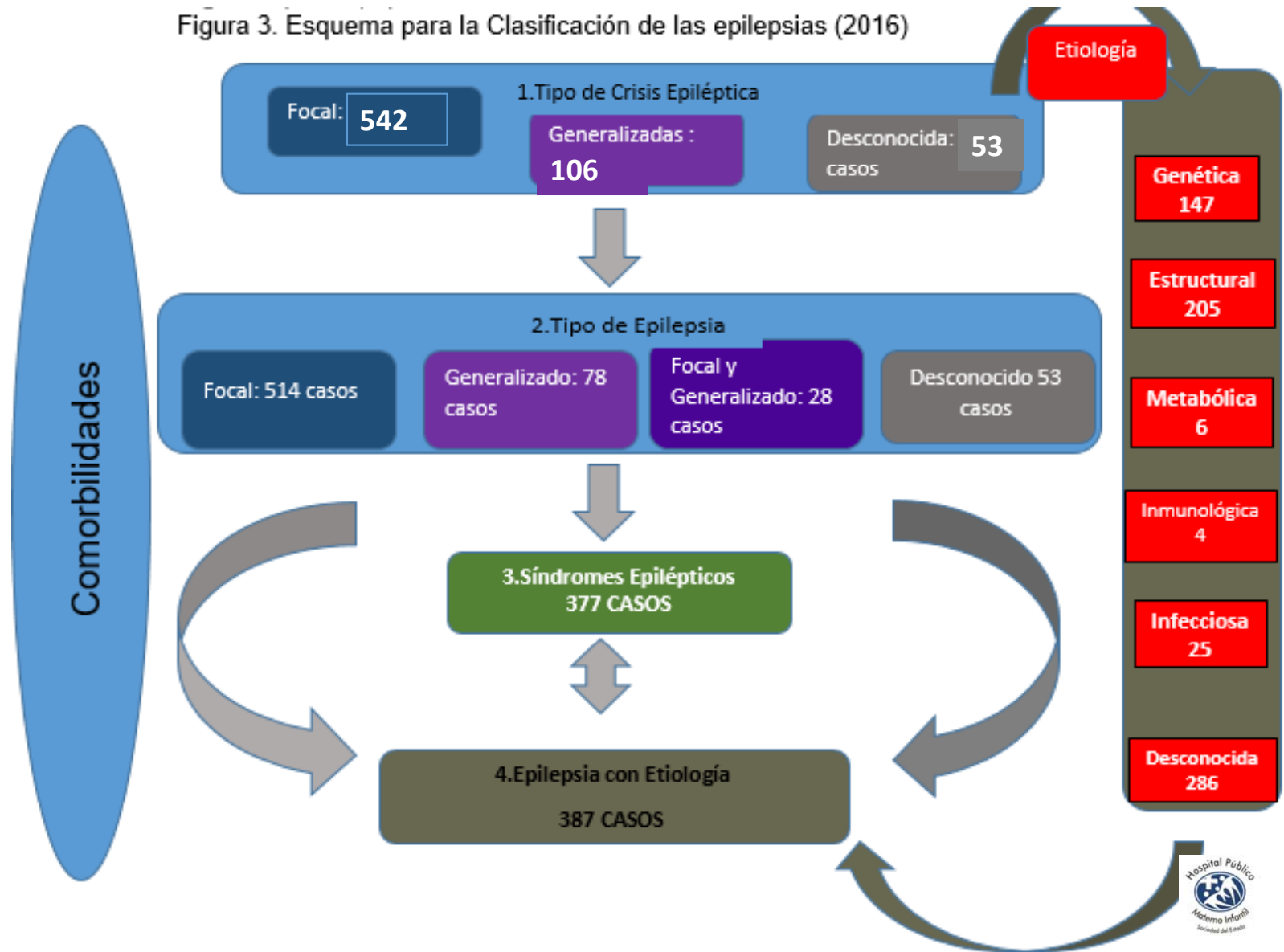
Etiología de las Epilepsias



■ Estructural ■ Genética ■ Infecciosa ■ Metabólica ■ Inmunológica



Figura 3. Esquema para la Clasificación de las epilepsias (2016)



Conclusiones y comentarios

- La Nueva propuesta de Clasificación pudo aplicarse y es útil en la población que concurrió a Nuestro Hospital.
- El tipo de crisis focal y el tipo de epilepsia focal fueron el grupo más frecuente en nuestra serie
- En la mayoría pudo reconocerse la etiología de la epilepsia y/o un SE con características electro-clínicas y evolutivas distintivas

Epilepsia: Diagnóstico

- EEG vigilia, sueño, HV, Fotoestimulación
- Video EEG
- TAC de cerebro
- RMN de cerebro
- SPECT Ictal
- PET
- Genética

De la Valoración electro-clínica a la Genética

Original article

Epileptic Disord 2003; 5: 45-9

Benign familial and non-familial infantile seizures: a study of 64 patients

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ABSTRACT – *Introduction:* The recently proposed diagnostic scheme for people with epileptic seizures and with epilepsy (*Epilepsia* 2001) includes two idiopathic focal epileptic syndromes with onset during the first year of life, the benign familial and non-familial infantile seizures.

Objective: To analyze the electroclinical features and evolution in patients with benign familial and non-familial infantile seizures.

Patients and methods: Sixty-four patients (36 males and 28 females) were evaluated at the Neurology Department of the J. P. Garrahan Children's Hospital between February 1990 and December 2001. We analyzed gender, age at onset, duration, manifestations, circadian distribution and frequency of seizures, family history of epilepsy and paroxysmal dyskinesias. EEG and neuroradiological studies were performed. The semiology of the seizures was analyzed only according to the description in the clinical history. Ictal EEGs could not be recorded.

Results: Twenty-five patients, 14 girls and 11 boys, had a family history of similar seizures with an age at seizure onset of 3 to 22 months (median of 5.5 months). Nine patients (36%) had apparently generalized convulsions only; five patients (20%) partial seizures only and ten patients (50%) had both partial and generalized seizures. Convulsions were brief, during wakefulness in all, and occurred in clusters in 12 patients (48%). Interictal EEG was normal in 24 patients (96%).

Similar seizures and age at onset were found in 14 fathers, ten mothers and one uncle of these patients. Twenty-two patients (88%) had their last seizure before the age of 30 months. Two siblings of the same family later had brief episodes of paroxysmal kinesigenic dyskinesia, which in one of them were associated with infantile seizures. Later, two fathers developed paroxysmal kinesigenic dyskinesia. One of them also had had infantile seizures. A second group of 39 patients (25 boys and 14 girls) showed similar electroclinical features and evolution but there was no history of infantile seizures in first-degree relatives family history of epilepsy was found in 12.8% of second-degree relatives, but the type of epilepsy could not be defined.

Conclusion: This study confirms the existence of a familial benign epileptic syndrome in infancy, of probable dominant autosomal transmission. A large group also had similar electroclinical features but without a family history. We discuss the possible relationships between the two groups and suggest that further genetic studies may solve the problem.

KEY WORDS: autosomal dominant, familial infantile seizures or convulsions, idiopathic epilepsy, non-familial infantile seizures or convulsions, paroxysmal choreoathetosis or dyskinesias.

Epilepsy Research (2010) 89, 96–103



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Benign infantile seizures: A prospective study

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KEYWORDS

Benign infantile seizures;
Benign focal epilepsy;
Familial infantile seizures;
Non-familial infantile seizures;
Infantile convulsions and evolution

Summary

Introduction: One idiopathic focal epileptic syndrome with onset during infancy is recognized, the benign infantile seizures (BIS).

Objective: To analyze the electroclinical features and evolution in patients with BIS and assess the difference between familial and non-familial infantile cases.

Patients and methods: We performed a prospective follow-up study in 41 patients seen at our department between September 2002 and March 2004, with BIS from 2 to 12 months of age. Among the 41 cases 6 were excluded.

Results: Thirty five had BIS after the follow-up. The follow-up was 60–77 months (median 69 months). They were divided in Group 1: 14 patients had a family history of similar seizures in infancy and Group 2: 21 without familial history of infantile epilepsy. Both groups have similar electroclinical features and family history of seizures is the only clue to the differential diagnosis. Seizures were brief, and occurred in cluster in 30 patients (85%). Interictal EEGs were normal in 34 cases (97%) and neuroimaging in all children. No one had seizures after finishing the antiepileptic treatment. Neurological examination and developmental milestones remained normal after the follow-up.

Conclusions: This study confirms the existence of BIS. Non-familial cases might represent novel mutations or sporadic cases of BIS. The recognition of BIS is possible at beginning of the epilepsy. To confirm the syndrome the follow-up is necessary.

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Table 1 Results of electroclinical features compared with Carballo et al (2007) series.

| | Carballo et al 2007 | | Our study | |
|--|-----------------------------------|----------|--------------|---------------|
| | BFIS | BNFIS | Group 1 BFIS | Group 2 BNFIS |
| Epilepsy syndromes | | | | |
| Number of cases | 40 | 65 | 14 | 21 |
| Age of onset (months) | | | | |
| Median | 6.5 | 9 | 6.5 | 6 |
| Range | 3-22 | 2-23 | 2-12 | 2-12 |
| Types of seizures | | | | |
| Focal | 20 (50%) | 31 (47%) | 4 (29%) | 3 (15%) |
| Apparently generalized | 10 (25%) | 16 (25%) | 8 (57%) | 11 (52%) |
| Secondarily generalized | 10 (25%) | 18 (28%) | 2 (14%) | 7 (33%) |
| In "Clusters" | 21 (52%) | 30 (46%) | 12/14(85%) | 18/21(85%) |
| Begin with cluster | - | - | 7/14 | 10/21 |
| Sporadic seizures followed by cluster | - | - | 5/14 | 8/21 |
| Sporadic seizures without cluster | - | - | 2/14 | 3/21 |
| Duration | | | 1-3 days | 1-4 days |
| Number of seizures | | | 2-7 | 2-6 |
| Interictal EEG | | | | |
| Normal | 24 | 37 | 13 | 21 |
| Abnormal | 1 | 2 | 1 | 0 |
| Family history of BIS | | | | |
| Mother or Father | 39 | 0 | 12 | 0 |
| Uncle | 1 | 0 | 2 | 0 |
| Sister | | | 2 | |
| Family History of others type of epilepsy | 3 | 9 | 2 | 2 |
| Paroxysmal Choreoathetosis | 8 (3 patients and 5 relatives) | 0 | 2 fathers | 0 |

BFIS: Benign familial infantile seizures
BNFIS: Benign non familial infantile seizures



Conclusión

- **CFBL y CBL (no familiares) presentan similares características electroclínicas**
- **Los casos no familiares podrían corresponder a mutaciones de novo o esporádicos casos de CBL**
- **Gen asociado a CBL**

Gen PRRT2 (CFBL) (Heron y cols., 2012, Cao y cols. 2012, Ono y cols 2012)

Casos esporádicos Gen PRRT2 + (Spechio y cols. 2013)

Explosión de la Genética en Epilepsia

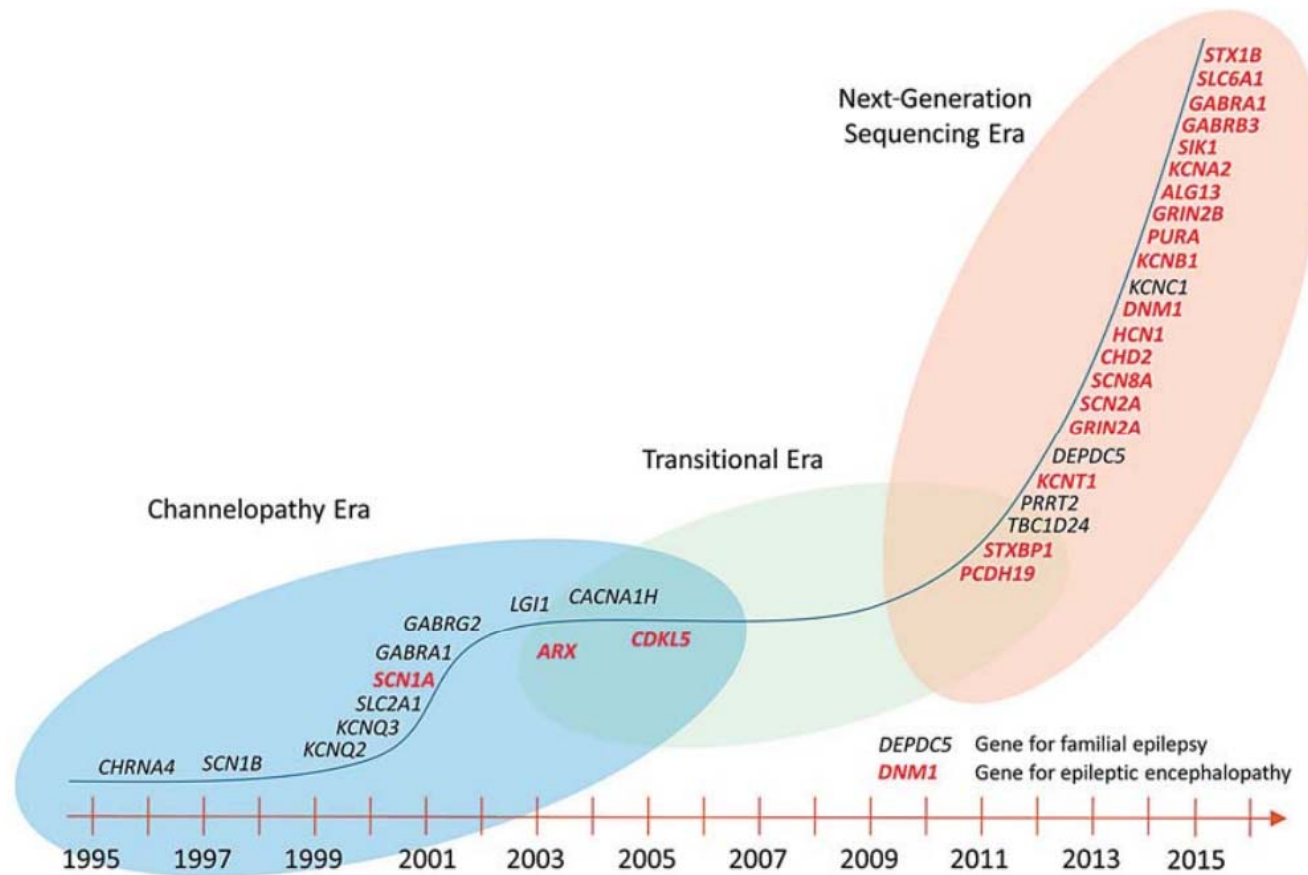


Fig. 2. Timeline of gene discovery in human epilepsies.

Epilepsias Genéticas: Etiología y Tratamiento

Validación de análisis



- Mayores avances en curso

Validación Clínica



- Clínica genética/neurología pediátrica
- Laboratorios clínicos y de investigación
- Inicio de la Epilepsia genética

Utilidad Clínica



| |
|---|
| <i>SCN1A</i> →avoid phenytoin and lamotrigine (generally) |
| <i>SCN2A</i> →high-dose phenytoin helpful |
| <i>SCN8A</i> →high-dose phenytoin helpful |
| <i>SLC2A1</i> →ketogenic diet |
| <i>PRRT2</i> →carbamazepine |
| <i>PLCB1</i> →inositol |
| <i>ALDH7A1</i> →pyridoxine |
| <i>PNPO</i> →pyridoxal-5-phosphate |
| <i>KCNQ2</i> →consider ezogabine for loss-of-function variants |
| <i>KCNT1</i> →consider quinidine for gain-of-function variants (trials needed) |
| <i>GRIN2A</i> →consider memantine, dextromethorphan for gain-of-function variants (trials needed) |
| <i>TSC</i> →consider everolimus |
| focal cortical dysplasia and other malformations of cortical development→consider everolimus or other mTOR inhibitors (trials needed) |

Utilidad Personal



- Finalización de odisea diagnóstica (medica o padres)
- Consejo genético
- Esperanza de precisión medica y estudios de investigación

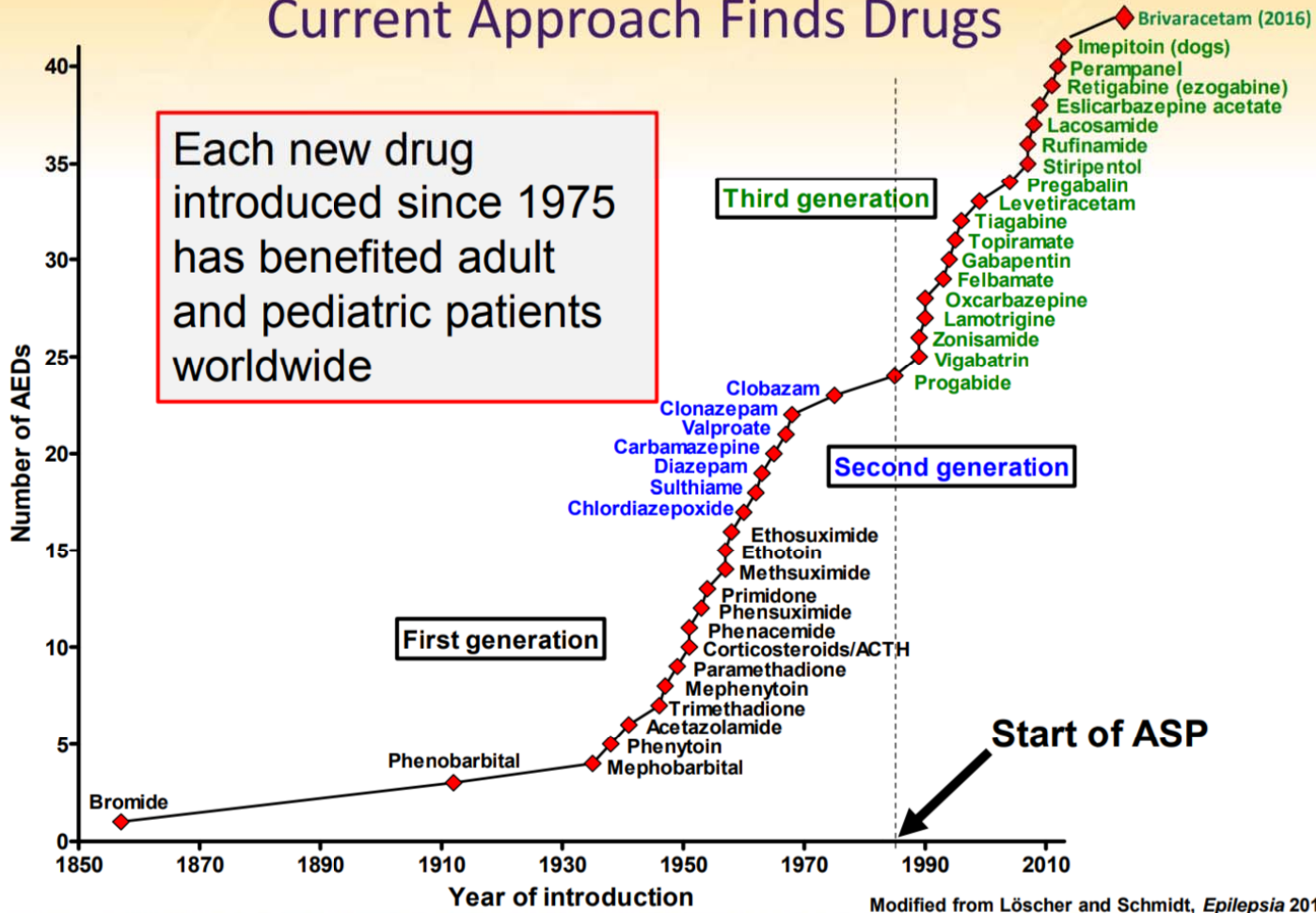
- Panduri 2017, *Epilepsy Currents*, 17:16-22

2016 Update

| | | | | | | | | | | | | |
|--------------|----------------|-----------|-------------|---------------|---------------|----------|--------|---------|-------------|----------------|---------------|----------|
| A2M | BHLHE22 | CHD4 | DIP2C | FETUB | HDAC4 | LANCL2 | MYO5A | PACS2 | PTPRO | RXFP1 | STK36 | TTN |
| AAK1 | BMP2 | CHIA | DISP1 | FLG | HECW2 | LCE1A | MYO7B | PAK6 | PTPRT | RYR2 | STX1B | TTYH1 |
| ABCA2 | BMS1 | CLDN19 | DNAH7 | FLNA | HFE | LDLRAD1 | MYOM3 | PALLD | PURA | RYR3 | STXBP1 | TUBB2A |
| ABCB9 | C16orf62 | CLIC5 | DNAH9 | FLNC | HIPK3 | LEKR1 | N6AMT1 | PAQR8 | PWWP2A | SAFB2 | SVOPL | UBQLN4 |
| ACOT4 | C17orf53 | CNTN5 | DNAJC6 | FLRT1 | HIST1H2BD | LEMD2 | NBAS | PASK | QRSL1 | SCAF4 | SYNE2 | UHRF1BP1 |
| ADAM21 | C18orf25 | COL4A4 | DNM1 | FOCAD | HIST2H2BE | LETM1 | NBEA | PCDHB13 | RAB5C | SCN1A | SYTL5 | UNC5CL |
| ADAMTSL4 | C1orf123 | COL7A1 | DSG2 | FRAT2 | HLTF | LIN7A | NCBP1 | PDCL2 | RAD54L2 | SCN2A | TAAR2 | UJSP7 |
| AGPAT3 | C1orf56 | COQ3 | DTYMK | FRMD4A | HNRNPH1 | LRP1 | NCOR2 | PDIK1L | RAET1L | SCN8A | TAF1 | UTRN |
| AHCY | C1QTNF6 | CPAMD8 | EDEM1 | G3BP1 | HNRNPU | LRP4 | NEDD4L | PHF21A | RALGAPB | SCYL1 | TAS2R4 | VPS37A |
| AKAP6 | C3orf22 | CR2 | EMILIN3 | GABBR2 | HRG | LUC7L3 | NEDD9 | PHIP | RALGPS1 | SDCBP2 | TCF4 | WDFY2 |
| AKR1C4 | C4orf37 | CREBBP | EPHB1 | GABRA1 | HSF2 | MAML3 | NETO2 | PIGS | RANBP17 | SELRC1 | TCTE3 | WDR1 |
| ALG13 | C5orf22 | CRTAC1 | ERG | GABRB1 | HSPG2 | MAN1A2 | NFASC | PIK3AP1 | RANGAP1 | SERPINC1 | TEP1 | WDR19 |
| ALMS1 | C6orf222 | CSMD2 | ETNK2 | GABRB3 | IFT172 | MAP3K8 | NFE2L1 | PIKFYVE | RARS | SETX | TET3 | WDR45 |
| ALS2CL | CACNA1A | CSNK1E | ETS1 | GAS2 | IQSEC2 | MAPK8IP1 | NFRKB | PITX1 | RASIP1 | SGK223 | TEX15 | WDR82 |
| ANK3 | CACNA1E | CTTNBP2NL | EXOSC2 | GCM2 | ITGAM | MAST1 | NIPA1 | PLA1A | RBM12 | SKA3 | THAP4 | WHSC1L1 |
| ANKRD12 | CAMK4 | CUBN | EXPH5 | GFM2 | ITGB4 | MCM3 | NLGN2 | PLCG2 | RBM45 | SLAMF1 | THOC2 | WRN |
| ANKRD24 | CANT1 | CUL2 | FAM102A | GLB1L3 | ITPR1 | MCM7 | NLRP11 | PLXNA1 | RCL1 | SLC16A3 | TIFA | XPO1 |
| ANKRD50 | CASP14 | CUX2 | FAM116B | GLIS3 | KCNB1 | MEOX2 | NLRP5 | PLXNB1 | RD3 | SLC1A2 | TMPRSS5 | YPEL4 |
| AP3S2 | CASP9 | CXXC11 | FAM133B | GLUL | KCNQ2 | MIOX | NLRP8 | PNMAL1 | RET | SLC25A13 | TNKS2 | YWHAG |
| ARFGEF1 | CASQ1 | CYP2U1 | FAM134A | GNAO1 | KCNQ3 | MKLN1 | NOLC1 | PPP1R3B | RFX3 | SLC26A11 | TNNI3K | ZBTB40 |
| ARRDC1 | CCDC125 | DAO | FAM21C | GPR108 | KCNT1 | MLL | NOTUM | PPP3CA | RGS14 | SLC26A8 | TPTE2 | ZC3H3 |
| ASH1L | CDC25B | DBP | FAM50A | GPR128 | KDR | MLL2 | NPAT | PPP6R2 | RHOG | SLC35A2 | TRIM29 | ZFH3 |
| ASXL1 | CDHR2 | DCX | FAM63B | GPR98 | KIAA0913 | MMP27 | NR1H2 | PRDM12 | RIOK3 | SLC5A10 | TRIM32 | ZNF248 |
| ATAD2B | CDKL5 | DDX50 | FAM86C1 | GRAMD2 | KIAA1324L | MRS2 | NTSR2 | PRDM4 | RNF186 | SLCO1B7 | TRIM8 | ZNF282 |
| ATIC | CDS2 | DDX58 | FARSA | GRIN1 | KIAA2018 | MSANTD1 | OR10S1 | PRG3 | RP1L1 | SMG9 | TRIO | ZNF354C |
| ATP2B4 | CELA3B | DECR2 | FASN | GRIN2B | KLHL11 | MTOR | OR2F2 | PRKX | RRP1B | SMURF1 | TRRAP | ZNF572 |
| B3GNT4 | CELSR1 | DHDDS | FBXL4 | GTF2B | KMT2B | MTRF1 | OR52E8 | PRR19 | RTKN2 | SNX30 | TSNAXIP1 | ZNF839 |
| BCL2L13 | CEP55 | DHTKD1 | FBXO41 | HBS1L | KNDC1 | MVK | OSBPL5 | PSD3 | RTN1 | SORBS3 | TSPYL1 | ZNF1 |
| BCLAF1 | CHD2 | DIAPH3 | FCGR2B | HCK | KRT34 | MYH6 | OSBPL7 | PTEN | RTP1 | SP2 | TTC16 | ZSCAN2 |
| BEST2 | | DIP2B | FERMT3 | HCN4 | KRTAP1-3 | MYO3A | OXA1L | PTK2B | RUVBL2 | SPG7 | TTF1 | ZSCAN21 |

Epilepsia : Tratamiento

Current Approach Finds Drugs



Epilepsia: Tratamiento

| | 1ra. Elección | 2da. Elección | Otras opciones |
|-------------------------------|---------------|---------------|-----------------------|
| Epilepsias Focales | OXC O CBZ | VPA | CLB-LVT-LCS-ESCBZ |
| Epilepsias Generalizadas | | | |
| Ausencias | VPA | ESM | LTG-BZP |
| Epilepsias Mioclónicas | VPA | LTG | CLB-TPM-ZNS |
| EMJ | VPA-LVT | LTG | TPM-CZP |
| Síndrome de Lennox Gastaut | VPA | LMT | ESM-CLB-RFM-TPM-DC |
| Epilepsia Mioclónico astática | VPA | ETM-CLB-LMT | DC-LVT-SLT-EV |
| Epilepsia con CTCG | VPA | LMT | LVT-TPM-CLB |
| Espasmos Epilépticos | VGB | ACTH | Piridoxina-AVP-TMP-DC |

Respuesta a DAE en una población pediátrica argentina aplicando los nuevos conceptos de clasificación de Epilepsia (Guzman A. y cols. 2018.)

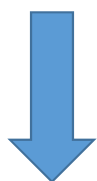
- **Objetivo:** Analizar la respuesta a DAE utilizando la nueva clasificación de epilepsia y síndromes epilépticos de ILAE
- **Material y Métodos:** Estudio descriptivo y prospectivo. 487 pacientes evaluados con epilepsia en el Hospital Público Materno Infantil (HPMI), desde 1 de agosto del 2016-30 de marzo del 2018.
- Se dividió en G1: síndromes epilépticos fármaco-sensibles, G2: epilepsias no sindromáticas fármaco-sensibles, G3: síndromes epilépticos resistentes a drogas y G4: epilepsias no sindromáticas resistentes a drogas. Se evaluaron DAE utilizados
- **Resultados:** 487 pacientes cumplieron criterios de Epilepsia y se definió sensibilidad a drogas.

Tratamiento

| SENSIBLE n°(%) | RESISTENTE n° (%) |
|----------------|-------------------|
| 326 (66,9) | 161(33,1) |
| 44 m | 23 m |
| 6a8m | 6a3m |



Grupo 1
Síndromes epilépticos
57%



Grupo 2
No SE
43%

Drogas antiepilépticas utilizadas en Monoterapia

- 1ra generación:
 - Fenobarbital: 33 (10.12%)
 - Epilepsia inicio 1er año de vida no EE: 25/52 (48%)
- 2da generación
- Acido Valproico: 137/326 (42%)
 - Epilepsias sindromáticas: 68/186 (36,5%)
 - Focales: 36/114 (31%)
 - Generalizadas 31/43 (72%)
 - Epilepsias no sindromáticas 69/140 (49%)
 - Focales: 56/120 (46,5%)
 - Generalizadas: 13/20 (65%)

Drogas antiepilépticas utilizadas en Monoterapia:

- Clobazam (CLB) 17 (5.2%)
 - EBI-R: 9/28 (32%)
- Carbamazepina (CBZ) 16 (4.9%)

- 3ra generación
- Oxcarbazepina (OXC) 23 (7.05%)
- Levetiracetam 6 (1.8%)
- Vigabatrina 3 (0.9%)
- Topiramato 2 (0.6%)

**EPILEPSIA
RESISTENTE A DAE**

MENORES 2 AÑOS
• Piridoxina
• Ácido fólico
• Fosfato de Piridoxal

OTRAS DAE MONOTERAPIA ← **MONOTERAPIA (hasta máxima dosis)**

**AGREGAR 2 DAE
(permanente hasta máxima dosis)**

**OTRAS ALTERNATIVAS
(ACTH o corticoides
Gamaglobulina EV)**

← **AGREGAR BENZODIACEPINA** → **INTERNACIÓN Y SUSPENSIÓN DE DAE
(hasta incorporación de nueva DAE)**

DIETA CETOGÉNICA

ESTIMULADOR VAGAL

Evaluación Pre-quirúrgica

CIRUGIA



Adaptado de Caraballo y Fejerman, 2009

Epilepsia: Dieta Cetogénica

642

R. Caraballo et al./Seizure 20 (2011) 640–645

Table 1
Types of epilepsy or epileptic syndrome found in 212 patients with refractory epilepsy treated with the KD.

| Type of epilepsy and epileptic syndrome | Etiology | Number of patients | |
|--|---|--------------------|----|
| Symptomatic focal epilepsy | Cortical dysplasia | 20 | |
| | Tuberous sclerosis | 13 | |
| | Encephalitis | 18 | |
| | Hypoxic-ischemic encephalopathy | 11 | |
| | Porencephalic cyst | 3 | |
| | Vascular malformations | 4 | |
| Epilepsy with myoclonic-astatic seizures | | 38 | |
| | | 7 | |
| Cryptogenic Lennox-Gastaut syndrome | | 6 | |
| Symptomatic Lennox-Gastaut syndrome | Encephalitis | 6 | |
| | Cortical dysplasia | 10 | |
| | Chromosomal abnormalities | 4 | |
| | Neonatal hypoglycemia | 3 | |
| | Hypoxic-ischemic encephalopathy | 2 | |
| Cryptogenic West syndrome | | 8 | |
| Symptomatic West syndrome | Hypoxic-ischemic encephalopathy | 4 | |
| | Porencephalic cyst | 4 | |
| | Cortical dysplasia | 5 | |
| | Aicardi syndrome | 2 | |
| | Tuberous sclerosis complex | 2 | |
| | Septo-optic dysplasia | 1 | |
| | Meningitis | 1 | |
| | Encephalitis | 1 | |
| | Dravet syndrome | | 32 |
| | Cryptogenic epileptic encephalopathy with CSWS | | 3 |
| | Symptomatic epileptic encephalopathy with CSWS | | 2 |
| | Fever-induced refractory epileptic encephalopathy | | 5 |
| | Epilepsy with myoclonic absences | | 2 |
| Migrating focal seizures in infancy | | 1 | |

2



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



Long-term follow-up of the ketogenic diet for refractory epilepsy: Multicenter Argentinean experience in 216 pediatric patients

Roberto Caraballo^{a,*}, María Vaccarezza^c, Ricardo Cersósimo^a, Viviana Rios^b, Alejandra Soraru^a, Hugo Arroyo^a, Guillermo Agosta^c, Nidia Escobal^a, Martha Demartini^b, Clarisa Maxit^c, Araceli Cresta^a, Delfina Marchione^c, María Carniello^b, Luis Paníco^b

^aHospital Nacional de Pediatría "Prof. Dr. Juan P. Garrahan", Buenos Aires, Argentina

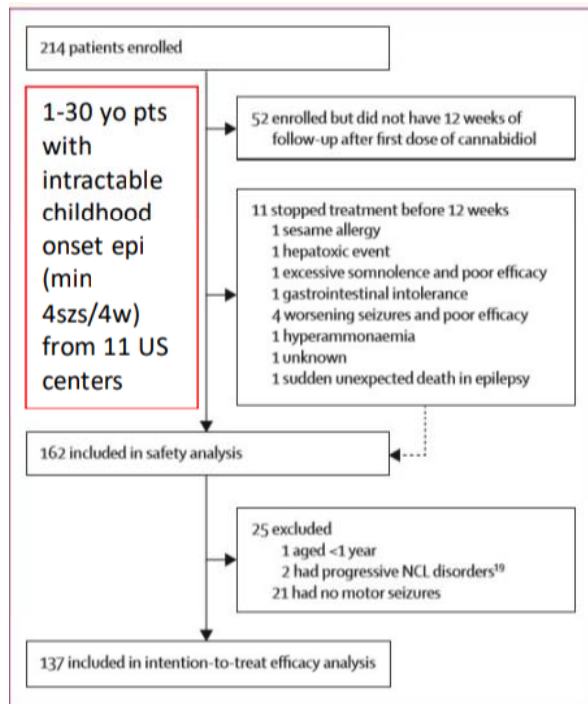
^bCentro de Neurociencias del Litoral, Santa Fé, Argentina

^cHospital Italiano, Buenos Aires, Argentina

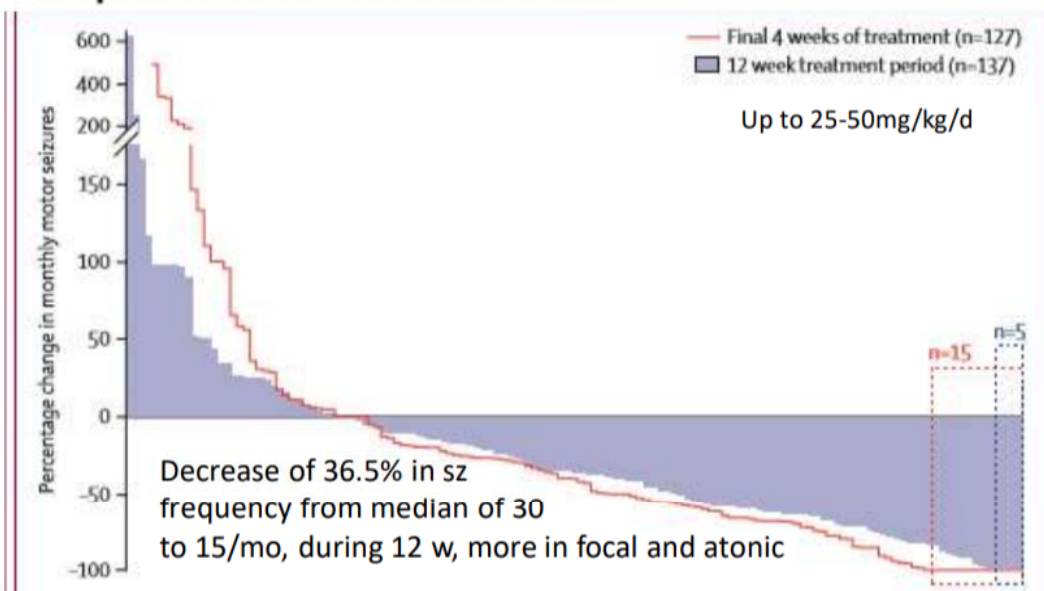
PERSISTEN EN DC A LOS 18m DE INICIO: 216/140 (65%)

- LC 31/140 (22%)
- REDUCCION 75-99% 50 (36%)
- REDUCCION 50-74% 14 (10%)
- REDUCCION MENOR 50% 47 (33,5%)
- 20 LC DEJARON LA DC.
- RECURRIERON LAS CRISIS EN 5 (25%)

Epilepsia: eficacia de Cannabis



Cannabidiol in patients with treatment-resistant epilepsy: an open-label interventional trial



- 39% reducción del mayor o igual 50% (respondedores)
- 32 pacientes con Síndrome de Dravet (49,8%) reducción mayor o igual al 50%
- 30 pacientes con Síndrome de Lennox Gastaut (36.7%) respondedores

Devinsky, Lancet Neurol 2015

Epilepsia: eficacia de Cannabis

- 74 pacientes (88% dishabilidad intelectual)

- Reducción crisis:

75-100% 18%

50-75% 34%

25-50% 12%

Menos 25%: 26%

Libre de crisis 1

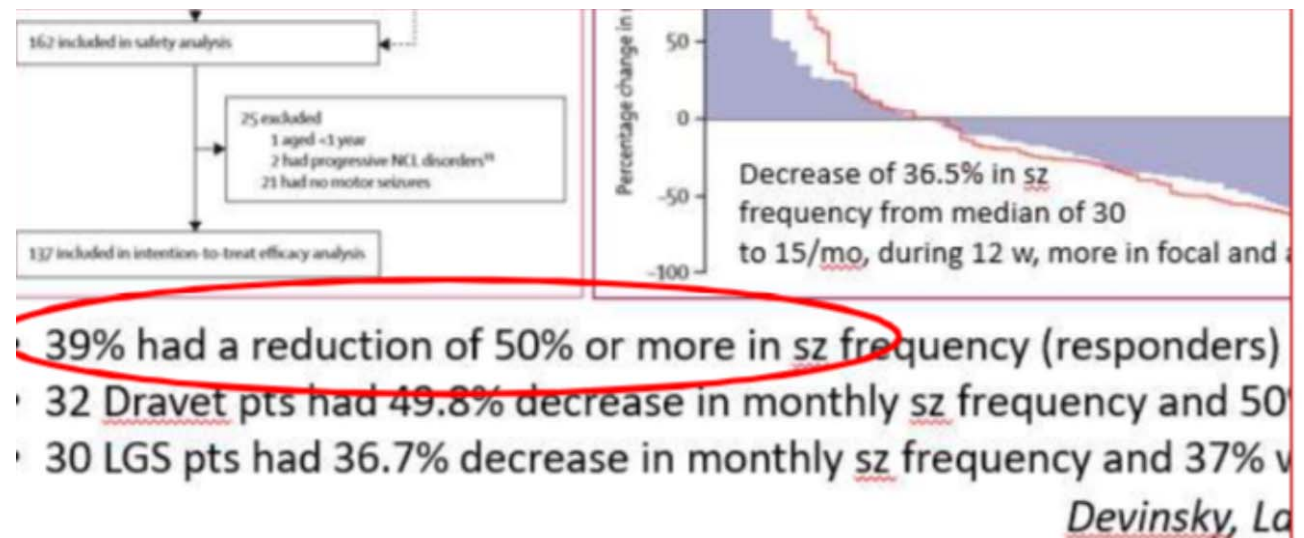
60% otros beneficios: mejoría comportamiento, estado de alerta, lenguaje, comunicación, habilidades motoras y sueño

EA

- Agravamiento de crisis
- somnolencia
- Fatiga
- T. Gastrointestinales
- Irritabilidad

Eficacia de Canabinoides en Epilepsia

- Eslicarbazepina 33,9%
- Restigabine 34,9%
- Carisbamate 25,9%
- Lacosamida 38,1%
- Brimaracetan 43 %
- Parampanel 33%
- 15 estudios en total 32,5%%



Gao L. et al, Epi Research 2012

Conclusiones

- Definir si es una crisis epiléptica o no epiléptica
- Descartar una convulsión aguda sintomática ante una primera convulsión
- En caso de epilepsia definir, tipo de crisis, tipo de epilepsia, evaluar probable síndrome epiléptico y buscar la etiología
- Debemos hacer un adecuado análisis electro-clínico para hacer un adecuado diagnóstico de la epilepsia
- Debemos hacer un adecuado uso de las opciones terapéuticas y DAE
- En caso de Epilepsia resistente a DAE hay tratamientos alternativos que han demostrado un efecto beneficioso para estos pacientes

Muchas Gracias...

