

2591

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SHIFT 7 - CHILD NEUROLOGY

Etiology and clinical study of basal ganglionic disorders in a sample of Egyptian children

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Background: In childhood, the metabolic activity of the basal ganglia is greater and they are particularly prone to injury. Many disease entities may present as basal ganglia abnormalities. Damage to the basal ganglia cells may cause problems controlling speech, movement, consciousness, muscle tone, posture and cognition.

Objective: To determine the etiology of basal ganglionic disorders in a sample of Egyptian children.

Patients and Methods/Material and Methods: A cross-sectional observational study was utilized on 23 patients attended at the Pediatric Neurology Outpatient Unit of Neurology department at Al-Azhar University Hospitals during a period of one year from beginning of November 2014 to end of October 2015.

A specialized pediatric neurological sheet, Cognitive assessment in children using Stanford-Binet Intelligence Scale: Fourth Edition and Laboratory investigations were performed.

Results: The frequency of male patients was slightly higher than the female patients, males were 13 (56.5%) and females were 10 (43.5%) acute ischemic stroke was the most frequent cause, which was founded in 8 (34.8%) cases, followed by 7 (30.4%) had metabolic cases, 6 (26.1%) infectious causes, and lastly 2 (8.7%) cases toxic causes. According to brain MRI imaging, bilateral cases were 16 (69.70%), unilateral cases Putamen were 2 (8.7%), Caudate and putamen were 1 (4.3%), Caudate and lentiform nucleolus were 1 (4.3%), Caudate were 2 (8.7%), Globus pallidus were 1 (4.3%).

Conclusion: Acute ischemic stroke was the most frequent cause of basal ganglionic lesion in a sample of Egyptian children.

Table 1. Age and sex distribution of patients.

Variables	(n=23)
Age (years)	
Mean ±SD	9.0±4.0
Range	2-17
Gender, n (%)	
Male	13 (56.5%)
Female	10 (43.5%)

Table (2): Etiological causes of basal ganglia lesions in the studied children.

Variables	(n=23)
Causes, n (%)	
Ischemic	8 (34.8%)
Metabolic	7 (30.4%)
Infectious	6 (26.1%)
Toxic	2 (8.7%)

b): Relationship between etiological factors and laboratory evaluation in studied children.

Variables	Ischemic (n=8)	Metabolic (n=7)	Infectious (n=6)	Toxic (n=2)
Pancytopenia	0 (0.0%)	4 (57.1%)	2 (33.3%)	0 (0.0%)
Liver dysfunction	0 (0.0%)	5 (71.4%)	3 (50.0%)	0 (0.0%)
Renal dysfunction	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Elevated ESR	4 (50.0%)	3 (42.9%)	2 (33.3%)	0 (0.0%)
Hyperglycemia	1 (12.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Hypoglycemia	0 (0.0%)	1 (14.3%)	0 (0.0%)	0 (0.0%)
Dyslipidemia	2 (25.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Positive ANA	0 (0.0%)	-	-	-
Positive anti-cardiolipin	0 (0.0%)	-	-	-
Elevated INR	0 (0.0%)	-	-	-
Leukocytosis (CSF)	-	-	2 (33.3%)	-
Elevated protein (CSF)	-	-	3 (50.0%)	-
Increased serum ceruloplasmin	-	4 (57.1%)	-	-
Decreased serum copper	-	4 (57.1%)	-	-
Increased urinary copper	-	4 (57.1%)	-	-
Hyponatremia	-	0 (0.0%)	-	-
Hypoparathyroidism	-	1 (14.3%)	-	-

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2592

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SHIFT 7 - FUNCTIONAL DISORDERS AND BEHAVIORAL NEUROLOGY
Oral cannabis extracts as a promising treatment for the core symptoms of autism spectrum disorder: Preliminary experience in Chilean patients

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Background: Preclinical studies and several anecdotal case reports suggest a dysfunctional endocannabinoid system implicated in Autism Spectrum Disorder (ASD).

Objective: To report our preliminary findings in patients with ASD treated with oral cannabis extracts.

Patients and Methods/Material and Methods: We retrospectively reviewed all consecutive patients seen between June 2016-March 2017, with ASD diagnosis according to DSM-V, treated with sublingual whole plant cannabis extracts for at least three months. We reviewed demographic/clinical data, neuroimaging/EEG studies, vision/audition/genetic/metabolic tests, and parental/school/neuropsychological reports. Type of cannabis strain, CBD:THC ratio, daily dose of CBD/THC/CBN, and adverse events were documented. Clinical changes were estimated using Clinical Global Impression of Improvement (CGI-I) and Autism Parenting Stress Index (APSI). Informed consent was obtained.

Results: 20 children and one adult patients were selected. Mean age: 9 years, 10 months (range: 26 mo-22 yo), 15 males. Mean follow-up: 7,6 mo (range: 3-12). 66,7% of patients had significant improvement according to CGI-I and APSI. Most cases improved at least one of the core symptoms of ASD, including social communication, language, or repetitive behaviors. Additionally, sensory difficulties, food acceptance,

feeding and sleep disorders, and/or seizures were improved in most cases. 71.5% of patients received balanced CBD:THC extracts; 19.0% high-CBD; and 9.5% high-THC extracts. Oral cannabis extracts were well tolerated. Two patients had more agitation and one had more irritability, effects that were solved by changing the strain.

Conclusion: In this small series of ASD patients, oral cannabis extracts were dramatically more effective than conventional medicines. Large randomized controlled trials are needed to establish efficacy and safety of medicinal cannabis in ASD.

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2593

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SHIFT 7 - FUNCTIONAL DISORDERS AND BEHAVIORAL NEUROLOGY
A study on comparative efficacy and adverse effects of methylphenidate versus atomoxetine

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Background: Methylphenidate and atomoxetine are used in children with Attention deficit hyperactivity disorder (ADHD) for control of core symptoms.

As Methylphenidate is a restricted medicine availability is problematic. Atomoxetine which is available without restriction is useful but long term effect in ADHD in developing countries is not studied.

Objective: To compare the comparative efficacy of methylphenidate and atomoxetine in children with Attention deficit hyperactivity disorder (ADHD).

Patients and Methods/Material and Methods: Randomized controlled trial was conducted in 80 patients (age 6-12 y) with a diagnosis of ADHD, receiving methylphenidate or atomoxetine in pediatric neurology OPD of a tertiary care hospital of-SAT hospital, medical college, Trivandrum.

Children were randomized to open-label atomoxetine or methylphenidate group for 8 weeks. the baseline score of attention deficit hyperactivity disorder rating scale (ADHD-RS) and clinical global impression severity of illness (CGI-SI) are noted, efficacy is compared from the difference in mean score of ADHD -RS scale and CGI-SI scale after 8 weeks.

Results: Most of the patients were of age 8-9 years, and more proportion were boys from rural area; duration of illness was 1-2 years, 58.8% were below average in their current intellectual functioning, with poor school performance. 7.5% were having family history of ADHD, 16.3% of patients were undergoing special education programmes. A greater proportion of children were having ADHD subtype combined: **the mean efficacy index for methylphenidate was 2 and 1.7 for atomoxetine group. Majority patients were with medium or high medication adherence.**

Conclusion: Methylphenidate and atomoxetine are equally effective in treatment of ADHD.

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2594

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SHIFT 7 - FUNCTIONAL DISORDERS AND BEHAVIORAL NEUROLOGY
Psychogenic nonepileptic seizures in Latin America: Approach of the healthcare professionals

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Background: Psychogenic nonepileptic seizures (PNES) represent a diagnostic challenge. This is particularly the case in developing countries.

Objective: Our objective is to describe the current medical care in Latin America, identify patterns of practice and service gaps

Patients and Methods/Material and Methods: The PNES Task Force of ILAE devised a questionnaire for health professionals to investigate how they diagnose and treat PNES. Using this questionnaire, we conducted a 36-questions survey among health professionals to gain an overview of diagnostic and treatment services in Latin America.

Results: 118 eligible questionnaires were analyzed. Responses were received from 12 countries. Most respondents were young neurologists (81%), 60% female. A large proportion of respondents stated to know how to diagnose (81%) however many of them would not actually make the diagnosis (42%), or are inexperienced in arranging and offering treatment (56%). Most do not provide follow-up (75%) on patients without epilepsy. Although 81% of respondents feel that individualized psychological therapy is the most effective treatment, 70% of them are not well informed or sufficiently familiar with psychotherapy, and the actual availability of the service is very low (29%). Additionally, a large minority of participants reported not having access to the gold standard –inpatient video-EEG (34%).

Conclusion: Diagnostic and treatment service for patients with PNES in Latin America is deficient. Some gaps remain regarding technical resources, training and treatment. There is a high level of uncertainty regarding psychotherapy among neurologists, for which further education is needed. A better access to video EEG may improve PNES diagnosis and treatment.

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2595

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SHIFT 7 - FUNCTIONAL DISORDERS AND BEHAVIORAL NEUROLOGY
Individuals who experience an initial attack of urticaria during adolescence are at a higher risk for developing depression: A database study

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Background: Urticaria is a common ailment encountered in hospital. Although the symptoms of urticaria may increase stress, this association is not fully understood.

Objective: Our aim was to analyze the risk of depression following a diagnosis of urticaria using a nationwide population-based study

Patients and Methods / Material and Methods: We examined the Taiwan Longitudinal Health Insurance Database. A total of 6742 adolescents (aged 13-18 years) who were hospitalized for a first-attack urticaria between 2006 and 2009 were recruited as a study group, together with 20,226 matched nonurticaria enrollees as a control group. Each patient was prospectively followed for 1 year to identify episodes of depression. Cox proportional hazards models were used to compare the risk of depression between the study and control groups, making adjustments for the patients' places of residence and sociodemographic characteristics. Depression-free survival curves were also analyzed. Finally, the risks of depression were analyzed between various age groups.