Results

The study comprised 100 children and adolescents with idiopathic epilepsy from those attending the Pediatric Neurology Outpatient Clinic Benha University hospital in the period from June 2010 to April 2011. They were 48 males and 52 females with a male to female ratio 1/1.08. Their ages ranged between 7 and 180 months with a mean of 65± 48 months.

The results of this study was summarized in the following tables.

Table (1): Descriptive data of all studied patients upon enrollment

Age in months	**(Range)**	**Mean ± SD,**	
	7-180	65±48	
Sex		**NO.**	%
	Female	52	52.0%
	Male	48	48.0%
Order of Birth	1	26	26.0%
	2	28	28.0%
	3	28	28.0%
	4	14	14.0%
	5	4	4.0%
Consanguinity	-ve	70	70.0%
	+ve	30	30.0%
Family history of seizures	-ve	78	78.0%
	+ve	22	22.0%
Type of seizures	focal	18	18.0%
	Generalized	82	82.0%

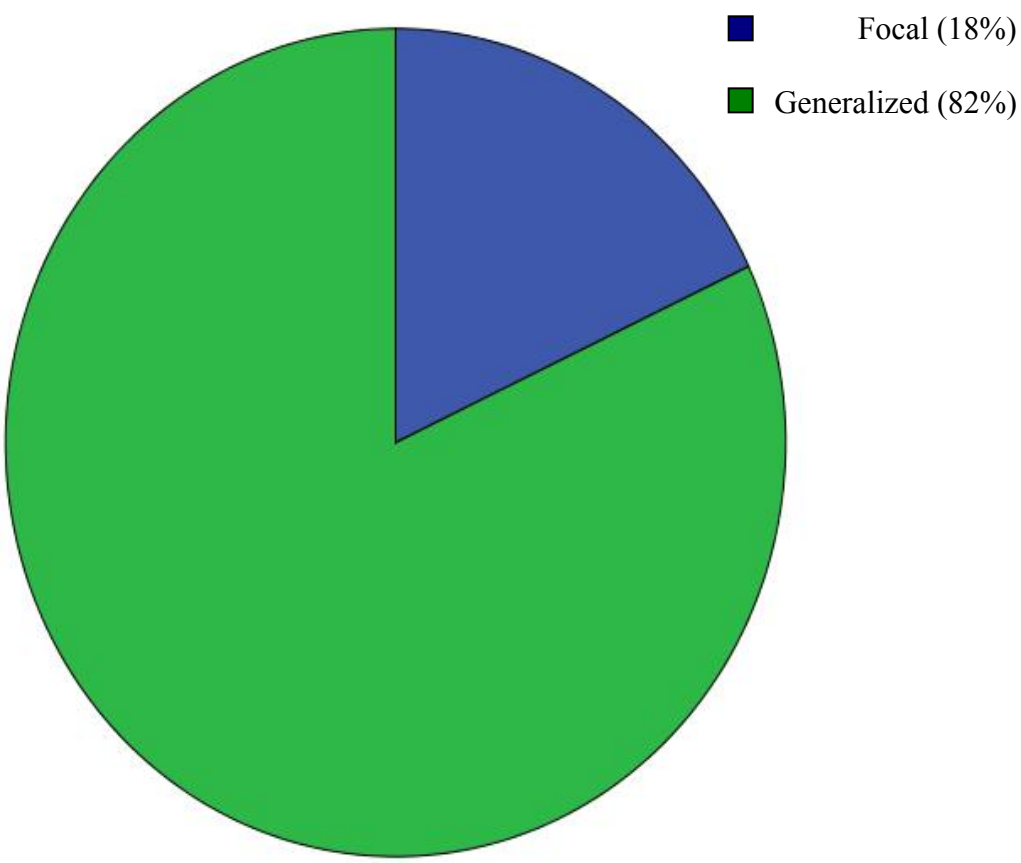

Fig.4 Types of epilepsy in our studied cases

Table (2): Descriptive data of seizures in studied cases:

Age at onset (months)	(Range)	Mean ± SD,	
	1-156	37±35	
Precipitating factors		**NO.**	**%**
	None	50	50.0%
	Fever	24	24.0%
	Others	12	12.0%
	Fever and others	14	14.0%
Incontinence during attack	Absent	64	64.0%
	Present	36	36.0%
Duration	<10 seconds	0	0%
	<1minute	18	18%
	1-10 minutes	42	42%
	>10minutes	40	40%
Number of attacks in last 6 months	None	32	32%
	1-3	26	26%
	4-6	25	25%
	>6	17	17%
Post ictal manifestations	No	6	6.0%
	Sleep	46	46.0%
	Drowsiness	32	32.0%
	Headache	16	16.0%
Time to return to normal in min	<1minute	10	10.0%
	1-10 minutes	0	0%
	10-30 minutes	18	18.0%
	30-60 minutes	18	18.0%
	1-3 hours	28	28.0%
	>3 hours	26	26.0%
Degree of seizure control	Controlled	32	32.0%
	Uncontrolled	46	46.0%
	De novo	14	14.0%
	Intractable	8	8.0%

Table (2) shows that 50% of our patients had precipitating factors for seizures. These included 24% precipitated by fever stimulation, 12% by other stimulation including (psychological stress – photic – trauma) and 14% precipitated by fever and others. Half of the patients could not identify any precipitating factor.

Sixty eight percent of those included in the study were still experiencing seizures, 14% were newly diagnosed cases which included within one month of seizure onset, while 46% were not yet controlled but did not fulfill the criteria of intractability (number of AEDs taken, compliance or frequency of seizures). Eight percent of patients fulfilled the criteria of intractability. Thirty –two percent of all patients did not experience seizures for at least more than six months on the current medications.

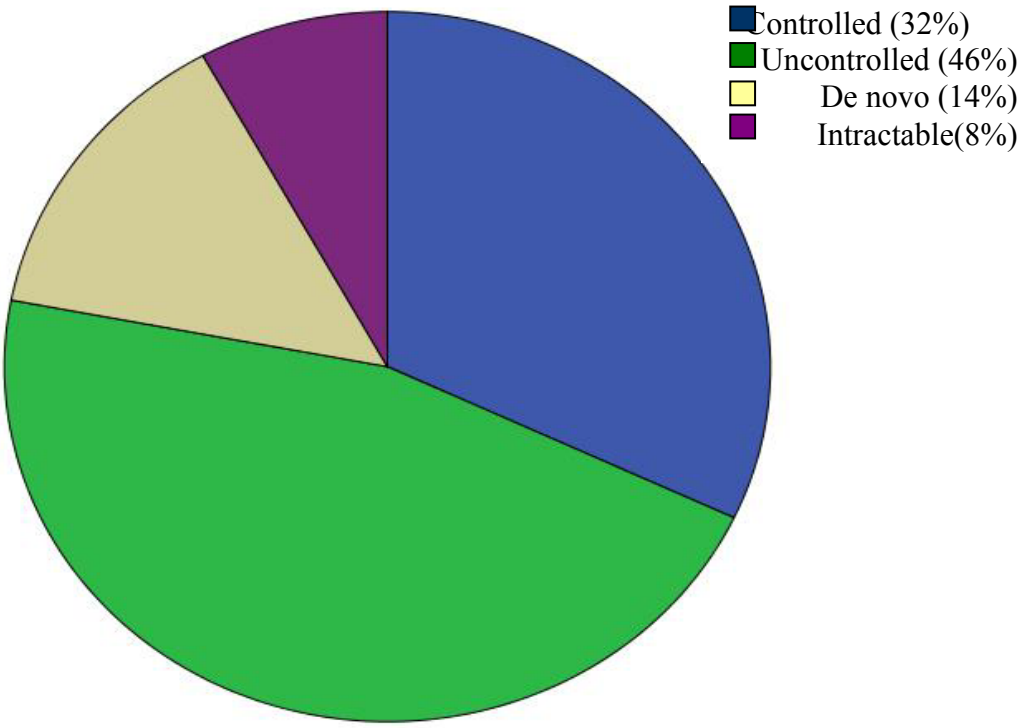

Fig. (5) Degree of control in our studied cases

Table (3): Distribution of idiopathic epilepsy syndromes according to ILAE (1989)

Epilepsy Type		
Focal	**Count**	**Percentage**
	18	18%
Benign rolandic epilepsy (BCECTS)	12	66.7%
Benign childhood epilepsy will occipital paroxysms	6	33.3%
Primary reading epilepsy	0	-
Generalized	82	82%
Benign neonatal familial convulsion	0	0%
Benign neonatal non familial convulsion	0	0
Benign myoclonic epilepsy of infancy	0	0%
Childhood absence epilepsy	4	4.9%
Juvenile absence epilepsy	0	0%
Juvenile myoclonic epilepsy	1	1.2
Epilepsy with generalized tonic clonic seizures on awaking	2	2.4%
Idiopathic generalized epilepsy nototherwise specified	75	91.4%

Table (13) shows that 18% of the patients were localized related epilepsy, while 82% of them presented with generalized epilepsy syndromes.

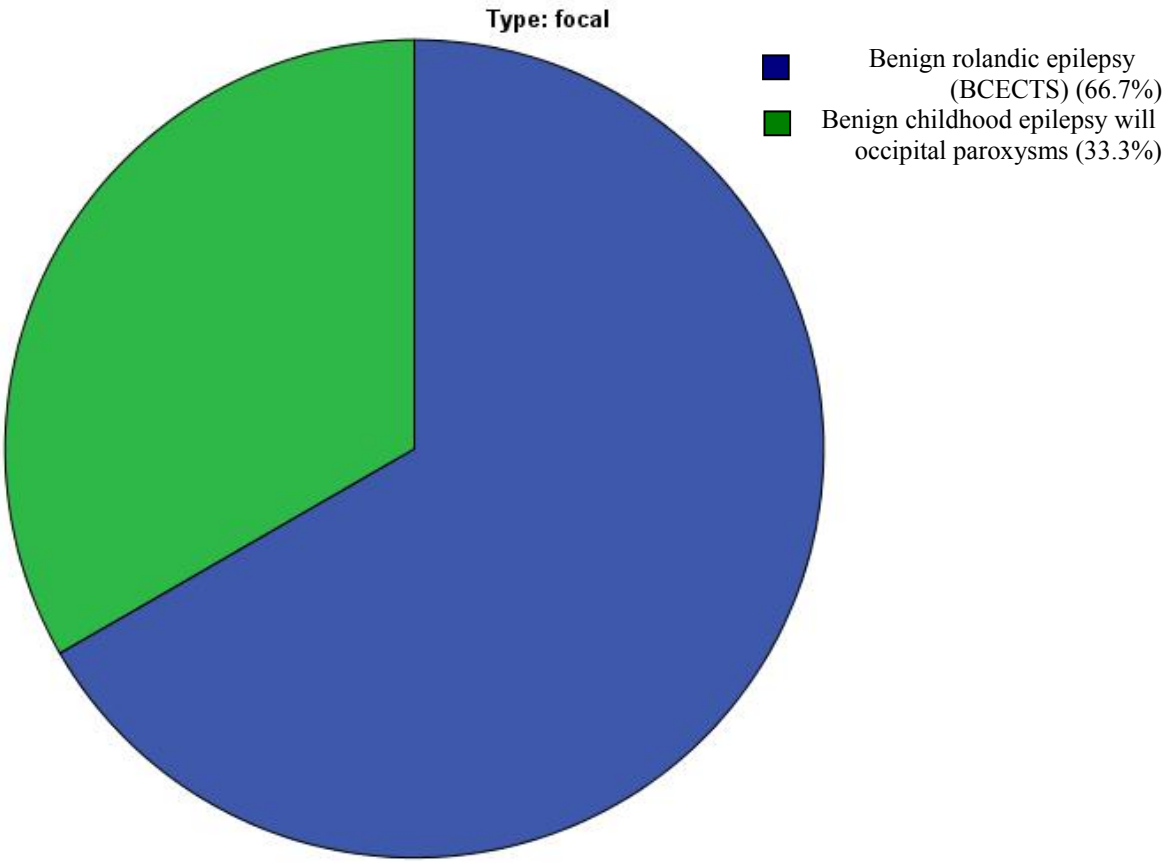

Fig. (6) Distribution of focal epilepsy in our studied cases

Table (4): EEG finding in our studied cases:

Type of epilepsy	EEG Findings	
	+ve	-ve
Focal	18	0
Generalized	50	32
Total	68	32

Table (4) shows that sixty - eight of the patients had their EEG showing generalized or focal epileptiform activity.

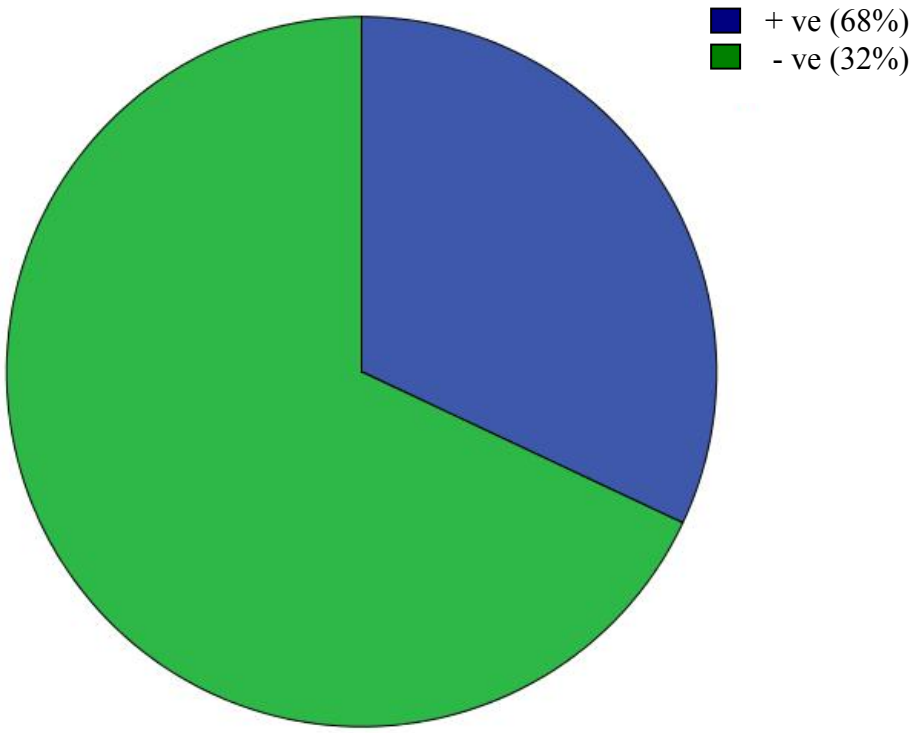

Fig. (7) EEG finding in our studied cases

Table (5): Number of anti epileptic drugs (AEDs) received by the patients:

No. of current AEDs	Count	Percentage
One AEDs	78	78.0%
Two AEDs	14	14.0%
Three AEDs	8	8.0%

Table (5) Shows that 78% of patients were on single antiepileptic drug. Fourteen percent of the Patients were on two drugs while only 8% needed a third one.

Table (6): Different antiepileptic drugs received by patients with focal idiopathic epilepsy:

	1st choice drug		2nd choice drug		3rd choice drug	
	Count	**Percentage**	**Count**	**Percentage**	**Count**	**Percentage**
Carbamazepeine	10	55.6%	4	22.2%	2	50%
Valporate	8	44.4%	0	0	0	0
Oxcarbamazepeine	0	-	0	0	2	50%
Topiramate	0	0	2	1.1%	0	0
Total	18	100%	6	100%	4	100%

Table (6) shows that in patients with focal epilepsy, carbamazepine was the initial choice in more than 55,6% of cases while valpraote was the initial choice in 44.4% .In patients who needed a second add on drug, Topiramate was added in 1,1%, and carbamazepine in 22.2% of the patients who were started on Valporate. In patients with focal epilepsy, only two patients needed a third antiepileptic drug which was Oxcarbamazepeine in both cases to over come sedative effects of Carbamazepeine.

Table (7): Different antiepileptic drugs received by patients with generalized idiopathic epilepsy:

	1st choice drug		2nd choice drug		3rd choice drug	
	Count	Percentage	Count	Percentage	Count	Percentage
Valporate	66	80.5 %	6	7.3%	0	0
Carbamazepeine	10	12.2 %	8	9.8%	2	16.6%
Ethoxamide	4	4.1%	2	8.3%	0	0
Lamotrigine	0	0	2	8.4%	4	33.3%
Revotril	0	0	4	16.6%	2	16.6%
Toperamate	0	0	2	8.3%	0	0
Levetiracetan	1	1.2 %	0	0	2	16.6%
Total	82	100%	24	100%	12	100%

Table (7) shows that in patients with idiopathic generalized epilepsy, valproate was the initial choice in 80.5% of cases while carbamazepine was the initial choice in 12.2 % and ethoxamide in only (4.9 %). In patients who needed a second add on drug, valproate was added in 7,3 %, carbamazepine in 9.8% and lamotrigine in 8.4%% of the patients each, while topiramate was added in only 8.3% of cases.

Table (8): Descriptive data of patients with Benign Childhood Epilepsy with Centrotemporal Spikes (BCECTS, Ronaldic epilepsy);

NO.		12	
Percentage within idiopathic epilepsy		12 %	
Percentage within focal idiopathic seizures		66.7 %	
Age in months	Mean ± SD,	97±51	
Age at onset (years)	Mean ± SD,	7±3.5	
Family history	-ve	5	42.9%
	+ve	7	57.1%
Sex	Male	10	85.7%
	Female	2	14.3%
EEG Findings	-ve	0	.0%
	+ve	12	100.0%
No. of current AEDs	Montherapy	10	83.4%
	Two AEDs	2	16.6%
	Three AEDs	0	.0%
1st choice drug	Carbamazepeine	7	57.1%
	Valporate	5	42.9%
2nd choice drug	Carbamazepeine	2	50 %
	Topriamate	2	50 %
Degree of seizure control	Controlled	7	57.1%
	Uncontrolled	5	42.9%
	De novo	0	-
	Intractable	0	-

Table (8) shows patients with (BCECTS,Rolandic epilepsy) were 12. 10males and 2 females,7 had +ve family history of seizures, 10of them were on monotherpy and 2 on double therpy , 7 were controlled and 5 patients still have seizures.

Table (9): Descriptive data of patients with Bengin Childhood Epilepsy with Occipital Paroxysms (BCEOP):

NO.		6	
Percentage within idiopathic epilepsy		6 %	
Percentage within focal idiopathic seizures		33.3 %	
On	Mean ± SD,	90±47	
Age at onset (years)	Mean ± SD,	5.5±1.7	
Family history	-ve	6	1000.0%
	+ve	0	0%
Sex	Male	2	33.3%
	female	4	66.7%
EEG Findings	-ve	0	.0%
	+ve	6	100.0%
No. of current AEDs	Montherapy	4	66.7%
	Two AEDs	2	33.3%
	Three AEDs	0	.0%
1st choice drug	Carbamazepeine	4	66.7%
	Valporate	2	33.3%
2nd choice drug	Carbamazepeine	2	100%
	Trileptal	0	-
Degree of seizure control	Controlled	0	.0%
	Uncontrolled	6	100.0%
	De novo	0	.0%
	Intractable	0	.0%

Table (9) shows that 6 patients were diagnosed with (BCEOP), all of them had no family history of seizures they were 4females and 2males, the 6 patients had +ve EEG, 4 patients were on monotherapy the other 2 were on double therapy, the 6 were not yet controlled.

Table (10): Descriptive data of patients with Juvenile myoclonic epilepsy:

NO.		1	
Percentage within idiopathic epilepsy		1 %	
Percentage within Generalized idiopathic seizures		1.2 %	
Age in months		168	
Age at onset (months)		120	
Family history	-ve	1	100 %
	+ve	0	0
sex	Male	0	0
	female	1	100%
EEG Findings	-ve	0	0%
	+ve	1	100.0%
No. of current AEDs	montherapy	1	100.0%
	Two AEDs	0	-
	Three AEDs	0	-
1st choice drug	levetiracetam	1	100%
Degree of seizure control	controlled	1	100.0%
	Uncontrolled	0	0
	De novo	0	0
	intractable	0	0

Table (10) shows the only patient that was diagnosed with juvenile myoclonic epilepsy she was 14 years old ,her seizures started when she was ten, she responded dramatically to levetiracetam.

Table (11): Descriptive data of patients with Childhood Absence Epilepsy (CAE);

NO.		4	
Percentage within idiopathic epilepsy		4 %	
Percentage within Generalized idiopathic seizures		4.9 %	
age in months	(Range)	45-96	
	Mean ± SD,	71±29	
age at onset (months)	(Range)	36-96	
	Mean ± SD,	66±35	
Family history	-ve	2	50.0%
	+ve	2	50.0%
sex	Male	0	-
	female	4	100.0%
EEG Findings	-ve	2	50.0%
	+ve	2	50.0%
no. of current AEDs	Monotherapy	3	75%
	Two AEDs	1	25%
	Three AEDs	0	0%
1st choice drug	Ethoxamide	4	100%
	Valporate	0	0%
2nd choice drug	valporate	1	100%
Degree of seizure control	controlled	1	25%
	uncontrolled	1	25%
	De novo	2	50%
	Intractable	0	50%

Table(11) shows that 4 patients were diagnosed with CAE ,all of them were females 2 had +ve EEG findings and 2 had +ve family history ,three of these patients were on monotherapy and only one was on double therapy, Ethoxamide is the drug of choice valporate was added to only one, one patient was controlled another one was not yet controlled 2 patients were newly diagnosed.

Table (12): Descriptive data of patients with Epilepsy with grand mal seizures on awakening (GTCSA);

NO.		2	
Percentage within idiopathic epilepsy		2 %	
Percentage within Generalized idiopathic seizures		2.4 %	
Age in months	(Range)	60- 84	
	Mean ± SD,	72±0	
Age at onset (months)	(Range)	60-60	
	Mean ± SD,	60±0	
Family history	-ve	2	100.0%
	+ve	0	0
sex	Male	2	100.0%
	female	0	0
EEG Findings	-ve	0	0%
	+ve	2	100.0%
No.of current AEDs	monotherapy	2	100.0%
	Two AEDs	0	0
	Three AEDs	0	0
1st choice drug	valporate	2	100.0%
Degree of seizure control	controlled	2	100.0%
	uncontrolled	0	0
	De novo	0	0
	intractable	0	0

Table(12) descriping the 2 patients that were diagnosed with GTCSA, they were males had no family history, both of them had +ve EEG findings ,they were on monotherapy and both of them were controlled.

Table (13): Descriptive data of patients with generalized idiopathic epilepsy not otherwise specified

NO.		75	
Percentage within idiopathic epilepsy		75 %	
Percentage within Generalized idiopathic seizures		91.4 %	
Age in months	Mean ± SD,	59±47	
Age at onset (months)	Mean ± SD,	30±29	
Family history	-ve	56	75.8%
	+ve	19	24.2%
Sex	Male	37	49%
	Female	38	51%
EEG Findings	-ve	29	38.6%
	+ve	46	61.4%
No. of current AEDs	montherapy	54	72%
	Two AEDs	13	17.3%
	Three AEDs	8	10.7%
1st choice drug	valporate	57	86.6%
	carbamazepeine	8	12.1%
2nd choice drug	carbamazepeine	8	12.1%
	valporate	4	6.1%
	LAmotrigine	2	3.0%
	Revotril	2	3%
3rd choice drug	Toperamate	2	3%
	Lamotrien	2	6%
	Revotril	2	3.0%
	Levetiracetam	2	3%
Degree of seizure control	Controlled	30	40%
	Uncontrolled	27	36%
	De novo	10	13.4%
	Intractable	8	10.6%

Table(13) discriping the majority of cases they were diagnosed with generalized epilepsy not otherwise specified (75). 75% of them had –ve family history 51%were females 61% had +ve EEG finding ,72%of them were on monotherapy 17% were on double therapy and only 10%were on triple therapy.