RESULTS

I-Socio-demographic characteristics of the studied group:

Table (1): Distribution of the studied cases of hydrocephalus according to the age of infants.

Type of hydrocephalus / Age	Congenital		Acquired		Total	
	No	%	No	%	No	%
Neonate	٤٢	٥٣.٢	٧	٢٨.0	٤٩	٤٧.١
Post- neonate	٣٧	٤٦.٨	١٨	٧٢.0	٥٥	٥٢.٩
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 4.83 P< 0.05						

This table illustrated by figure (1) demonstrates that there is a statistically significant difference (**P<0.05**) in comparing congenital and acquired hydrocephalic infants .Neonates form more than half **(٥٣.٢%)** of the congenital group &**28.0%** of the acquired group.

Figure (1): Distribution of studied cases of hydrocephalus according to age of infants

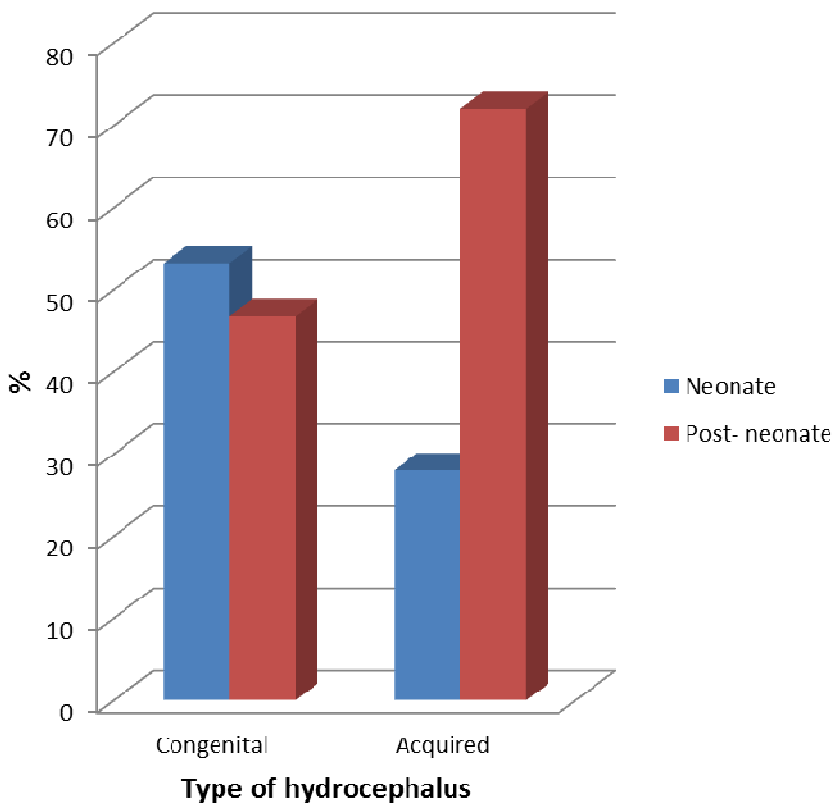

Table (2): Distribution of the studied cases of hydrocephalus according to the sex of infants.

Type of hydrocephalus / Sex	Congenital		Acquired		Total	
	No	%	No	%	No	%
Male	٤٠	٥٠.٦	١٨	٧٢.0	٥٨	٥٥.٨
Female	٣٩	٤٩.٤	٧	٢٨.0	٤٦	٤٤.٢
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 3.515 P< 0.05						

This table illustrated by figure (2) shows that there is a statistically significant difference (**P<0.05**) between males who form about half **(٥٠.٦%)**of the congenital hydrocephalic infants compared to ٧٢ **%**of acquired group .

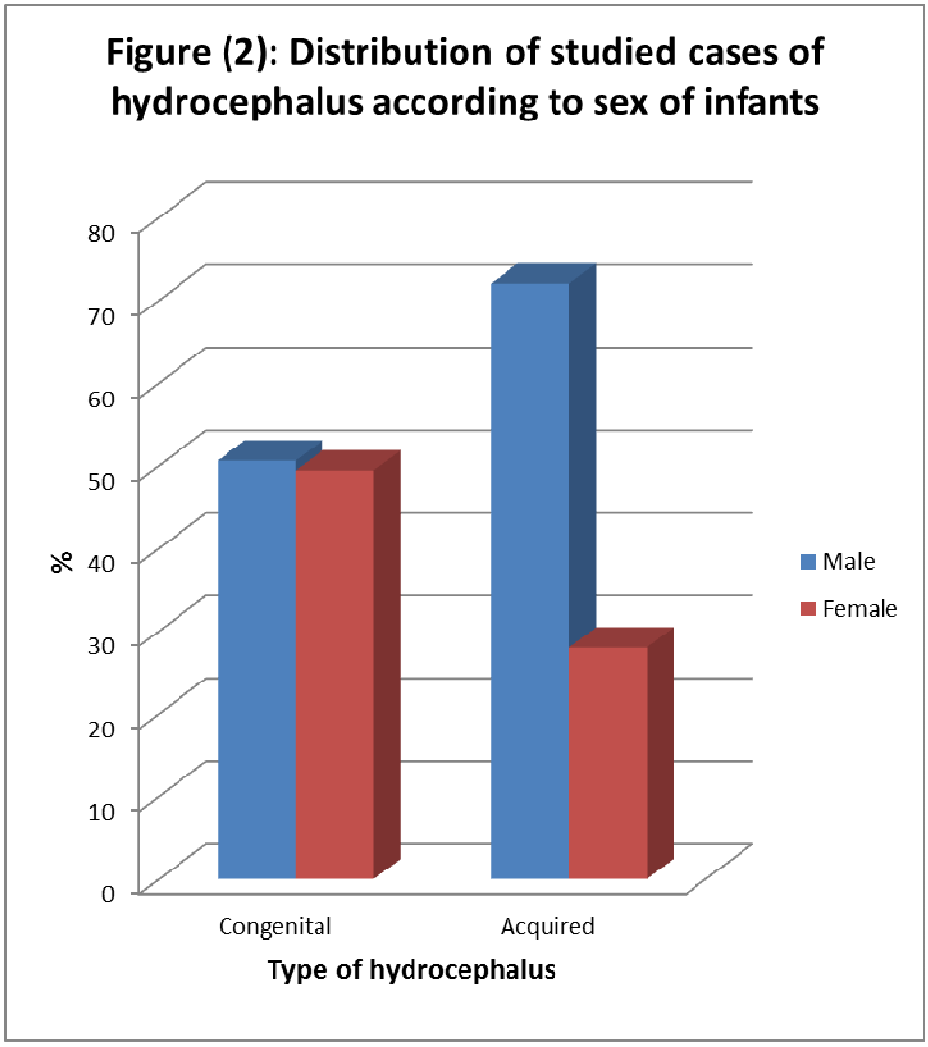
Figure (2): Distribution of studied cases of hydrocephalus according to sex of infants
80
70
60
50
40
30
20
10
0
%
Male
Female
Congenital
Acquired
Type of hydrocephalus

II-Risk factors of the studied group :

Table (3): Distribution of the studied cases of hydrocephalus according to consanguinity of parents.

Type of hydrocephalus / Consanguinity	Congenital		Acquired		Total		Z test	P
	No	%	No	%	No	%		
Present	١٧	٢١.٥	٥	٢٠.0	22	٥٥.٨	**0.001**	**<0.05**
Absent	٦٢	٧٨.٥	٢٠	٨٠.0	82	٤٤.٢	**0.139**	**>0.05**
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0	**0.0001**	**<0.05**

This table demonstrates that there is a statistically significant difference **(P<0.05)** between congenital hydrocephalic infants who have relative parents (**21.5%)** and acquired group **(20%)**.

Table (4): Distribution of the studied cases of hydrocephalus according to presence of other family history.

Type of hydrocephalus / Family history	Congenital		Acquired		Total		Z test	P
	No	%	No	%	No	%		
Present	٧	٨.٩	٢	٨.0	٩	٨.٧	**0.0001**	**<0.05**
Absent	٧٢	٩١.١	٢٣	٩٢.0	٩٥	٩١.٣	**0.0001**	**<0.05**
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0	**0.0001**	**<0.05**

This table shows that there is a statistically significant difference (**P<0.05)** between congenital hydrocephalic infants who have other family history (**8.9%)** and acquired group **(8%)**.

Table (5): Distribution of the studied cases of hydrocephalus according to maternal age.

Type of hydrocephalus / Maternal age	Congenital		Acquired		Total		Z test	P
	No	%	No	%	No	%		
٢١>	١٠	١٢.٧	٥	٢٠.0	١٥	١٤.٤	0.0001	<0.05
-٢١	٦٠	٧٥.٩	١٨	٧٢.0	٧٨	٧٥.0	0.0001	<0.05
+٣٥	٩	١١.٤	٢	٨.0	١١	١٠.٦	0.0001	<0.05
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0	0.0001	<0.05

The table illustrates that there is a statistically significant difference (**P<0.05)** between mothers of congenital hydrocephalic infants who are below 21 years old (**12.7%)** and mothers of acquired group (**20%).**

Table (6): Distribution of the studied cases of hydrocephalus according to onset of ante natal care of mothers.

Type of hydrocephalus / Ante natal care	Congenital		Acquired		Total		Z test	P
	No	%	No	%	No	%		
1st trimester	٦٢	٧٨.٥	٢٣	٩٢.0	٨٥	٨١.٧	0.0001	<0.05
2nd trimester	٢	٢.٥	١	٤.0	٣	٢.٩	0.01	<0.05
3rd trimester	٩	١١.٤	١	٤.0	١٠	٩.٦	0.03	<0.05
Absent	٦	٧.٦	٠	٠.0	٦	٥.٨	-	-
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0	0.0001	<0.05

This table shows that there is a statistically significant difference (**P<0.05)** between mothers of the congenital group who seek ANC in the 3rd trimester **(11.4%)** and mothers of the acquired group **(4%)**.

Table :(٧) Distribution of the studied cases of hydrocephalus according to presence of maternal diabetes.

Type of hydrocephalus / Maternal diabetes	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	٤	٥.١	٠	٠.0	٤	٣.٨
Absent	٧٥	٩٤.٩	٢٥	١٠٠.0	١٠٠	٩٦.٢
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 1.32 P> 0.05						

This table illustrates that there is a statistically insignificant difference (**P>0.05)** between mothers of congenital hydrocephalic infants who suffer from diabetes mellitus (**5.1%)** and acquired group **(0.0%)**.

Table (8): Distribution of the studied cases of hydrocephalus according to presence of maternal hypertension.

Type of hydrocephalus / Maternal hypertension	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	٢	٢.٥	٠	٠.0	٢	١.٩
Absent	٧٧	٩٧.٥	٢٥	١٠٠.0	١٠٢	٩٨.١
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 0.645 P> 0.05						

This table demonstrates that there is a statistically insignificant difference (**P>0.05)** between mothers of congenital hydrocephalic infants who suffer from hypertension **(2.5%)** and acquired group **(0%)**.

Table (9): Distribution of the studied cases of hydrocephalus according to pregnancy induced hypertension.

Type of hydrocephalus / Pregnancy induced hypertension	Congenital		Acquired		Total		Z test	P
	No	%	No	%	No	%		
Present	٤	٥.١	٣	١٢.0	٧	٦.٧	0.35	>0.05
Absent	٧٥	٩٤.٩	٢٢	٨٨.0	٩٧	٩٣.٣	0.0001	<0.05
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0	0.0001	<0.05

This table shows that there is a statistically insignificant difference (**P >0.05)** between mothers of congenital hydrocephalic infants who suffer from pregnancy induced hypertension **(5.1%)** and acquired group **(12.0%)**.

Table (10): Distribution of the studied cases of hydrocephalus according to order of gestation of mothers.

Type of hydrocephalus / Order of gestation	Congenital		Acquired		Total		Z test	P
	No	%	No	%	No	%		
١st	٢٩	٣٦.٧	٨	٣٢.0	٣٧	٣٥.٦	0.0001	<0.05
< 3rd	٣٣	٤١.٨	١٥	٦٠.0	٤٨	٤٦.٢	0.02	<0.05
≥ 3rd	١٧	٢١.٥	٢	٨.0	١٩	١٨.٣	0.0001	<0.05
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0	0.0001	<0.05

The table demonstrates that there is a statistically significant difference **(P<0.05)** between congenital hydrocephalic infants that have more than 3rd order of gestation **(٢١.٥ %)** and acquired group **(8.0%)**.

Table (11): Distribution of the studied cases of hydrocephalus according to drug abuse of mothers.

Type of hydrocephalus / Drug abuse	Congenital		Acquired		Total		Z test	P
	No	%	No	%	No	%		
Present	١٧	٢١.٥	٤	**16.0**	٢١	٢٠.٢	**0.001**	**<0.05**
Absent	٦٢	٧٨.٥	٢١	**84.0**	٨٣	٧٩.٨	**0.04**	**<0.05**
Total	٧٩	**100.0**	٢٥	**100.0**	١٠٤	**100.0**	**0.0001**	**<0.05**

This table illustrates that there is a statistically significant difference (**P<0.05)** between mothers of congenital hydrocephalic infants who have history of drug abuse **(21.5%)** and acquired group **(16%).**

Table (12): Distribution of the studied cases of hydrocephalus according to infection during gestation.

Type of hydrocephalus / Infection during gestation	Congenital		Acquired		Total		Z test	P
	No	%	No	%	No	%		
Present	١٣	١٦.٥	١	**4.0**	١٤	١٣.٥	**0.0001**	**<0.05**
Absent	٦٦	٨٣.٥	٢٤	**96.0**	٩٠	٨٦.٥	**0.0001**	**<0.05**
Total	٧٩	**100.0**	٢٥	**100.0**	١٠٤	**100.0**	**0.0001**	**<0.05**

This table shows that there is a statistically significant difference (**P<0.05)** between mothers of congenital hydrocephalic infants who have history of exposure to infection during gestation **(16.5%)** and acquired group **(4%).**

`

Table (13): Distribution of the studied cases of hydrocephalus according to presence of STDs of mothers.

Type of hydrocephalus / STDs	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	٢	٢.٥	٠	٠.0	٢	١.٩
Absent	٧٧	٩٧.٥	٢٥	١٠٠.0	١٠٢	٩٨.١
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 0.645 P> 0.05						

This table illustrates that there is a statistically insignificant difference (**P>0.05)** between mothers of congenital hydrocephalic infants suffering from one of STDs **(2.5%)** and acquired group **(0%).**

Table (14): Distribution of the studied cases of hydrocephalus according to trauma at time of labour.

Type of hydrocephalus / Trauma at labour time of	Congenital		Acquired		Total		Z test	P
	No	%	No	%	No	%		
Present	١	١.٣	١	٤.0	٢	١.٩	0.09	>0.05
Absent	٧٨	٩٨.٧	٢٤	٩٦.0	١٠٢	٩٨.١	0.0001	<0.05
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0	0.0001	<0.05

This table demonstrates that there is a statistically insignificant difference **(P>0.05)** between mothers of congenital hydrocephalic infants who have history of exposure to trauma at time of labour **(١.٣%)** and acquired group **(4%)**.

III-Diagnostic features of the studied group:

Table :(١٥) Distribution of the studied cases of hydrocephalus according to complaint of infants' mothers.

Type of hydrocephalus / Complaint	Congenital		Acquired		Total	
	No	%	No	%	No	%
Head enlargement	٣٢	٤٠.٥	١٣	٥٢.0	٤٥	٤٣.٣
Back swelling	٢٧	٣٤.٢	٠	٠.0	٢٧	٢٦.٠
Scalp swelling	٥	٦.٢	٠	٠.0	٥	٤.٨
Anterior fontanel bulge	٢	٢.٥	٣	١٢.0	٥	٤.٨
Others	١٣	١٦.٥	٩	٣٦.0	٢٢	٢١.٢
Total	٧٩	١٠٠.٠	٢٥	١٠٠.٠	١٠٤	١٠٠.٠
Corrected X2 =17.68 P> 0.05						

*Others include eye deviation, US diagnoses, vomiting, convulsions, dilated scalp veins, delayed sitting, decrease in attention and soft areas of skull.

This table demonstrates that there is a statistically insignificant difference (**P>0.05)** between complaint of mothers of congenital hydrocephalic infants (**40.5%)** and that of acquired group (**52%).**

Table (16): Distribution of the studied cases of hydrocephalus according to feeding refusal of infants.

Type of hydrocephalus / Feeding refusal	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	١٤	١٧.٧	١٠	٤٠.0	٢٤	٢٣.١
Absent	٦٥	٨٢.٣	١٥	٦٠.0	٨٠	٧٦.٩
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 5.31 P< 0.05						

This table illustrated by figure (3) demonstrates that there is a statistically significant difference (**P<0.05)** between feeding refuse of congenital hydrocephalic infants **(17.7%)** and that of acquired group **(40%).**

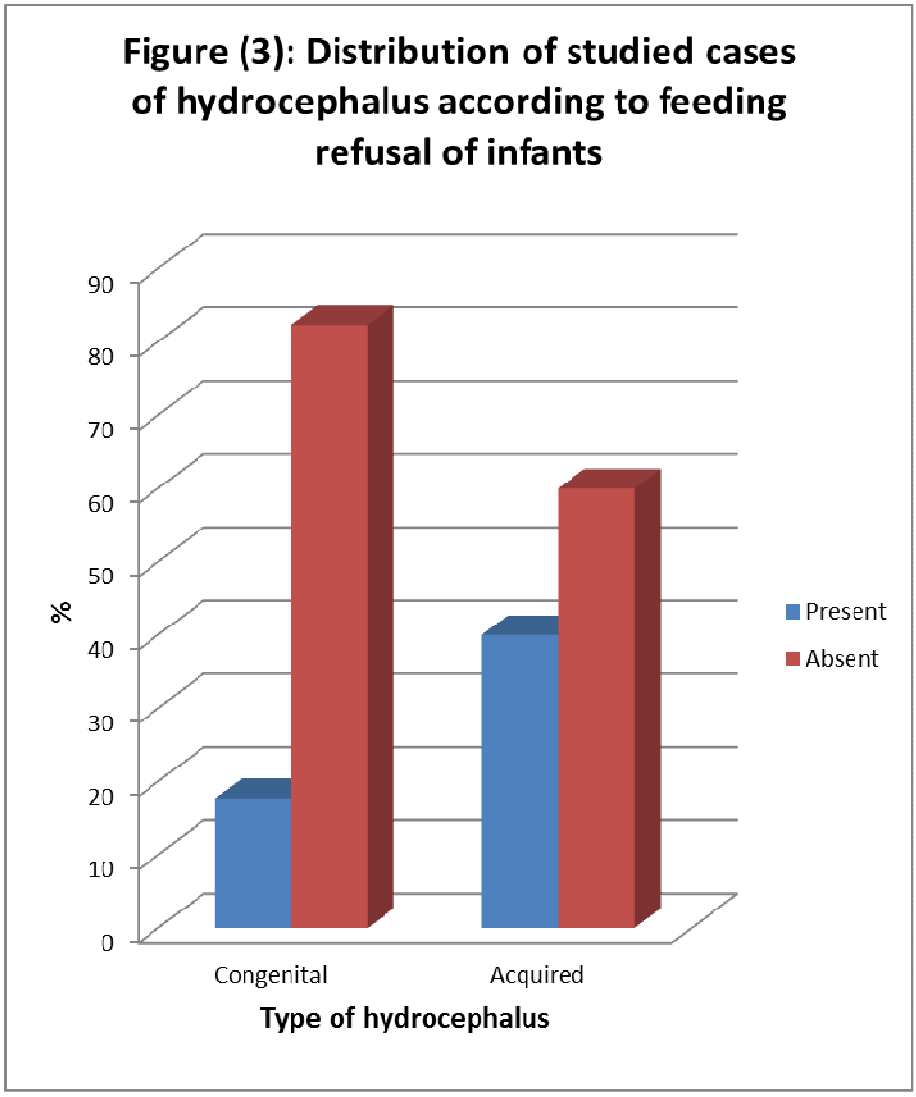
Figure (3): Distribution of studied cases of hydrocephalus according to feeding refusal of infants
90
80
70
60
50
40
30
20
10
0
%
Present
Absent
Congenital
Acquired
Type of hydrocephalus

Table (17): Distribution of the studied cases of hydrocephalus according to sunset appearance of eyes of infants.

Type of hydrocephalus / Sunset appearance of eyes	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	١٧	٢١.٥	١٠	٤٠.0	٢٧	٢٦.0
Absent	٦٢	٧٨.٥	١٥	٦٠.0	٧٧	٧٤.0
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 3.37 P> 0.05						

This table shows that there is a statistically insignificant difference (**P>0.05)** between sunset appearance of eyes of congenital hydrocephalic infants (**21.5%)** and that of acquired group **(40%).**

Table (18): Distribution of the studied cases of hydrocephalus according to vomiting of infants.

Type of hydrocephalus / Vomiting	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	١٥	١٩.0	١٠	٤٠.0	٢٥	٢٤.0
Absent	٦٤	٨١.0	١٥	٦٠.0	٧٩	٧٦.0
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 4.59 P< 0.05						

This table illustrated by figure (4) demonstrates that there is a statistically significant difference **(P<0.05)** between suffering from vomiting of congenital hydrocephalic infants **(١٩%)** and that of acquired group **(40%).**

Figure (4): Distribution of studied cases of hydrocephalus according to vomiting of infants

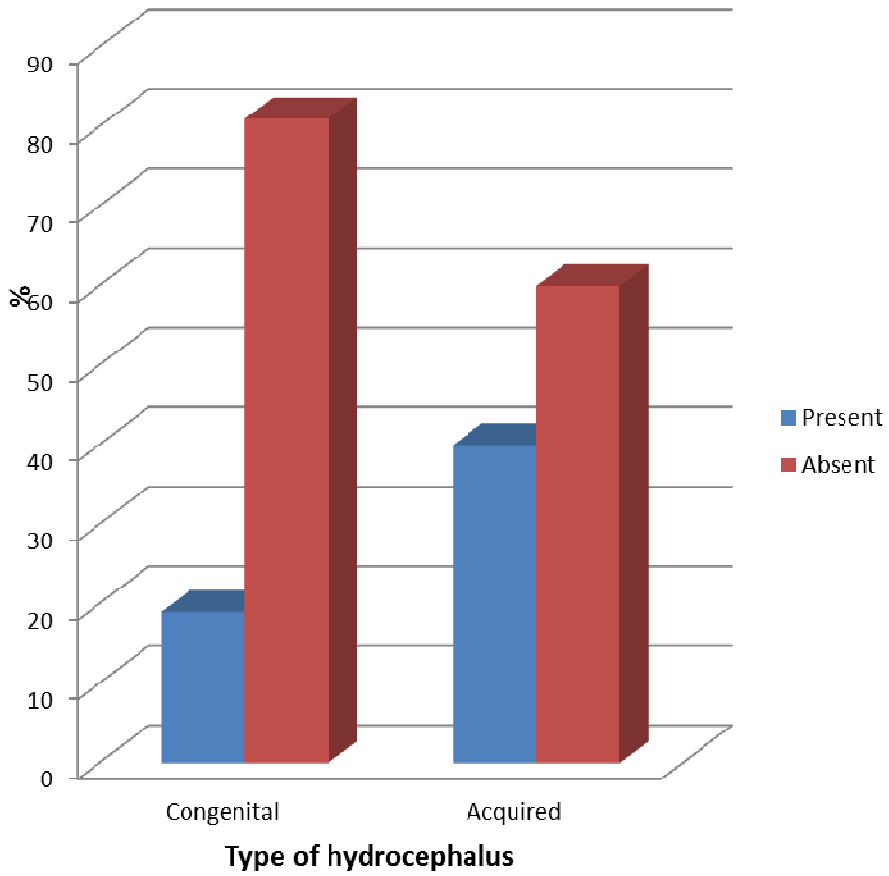

Table (19): Distribution of the studied cases of hydrocephalus according to convulsions of infants.

Type of hydrocephalus / Convulsions	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	٦	٧.٦	١١	٤٤.0	١٧	١٦.٣
Absent	٧٣	٩٢.٤	١٤	٥٦.0	٨٧	٨٣.٧
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 18.4 P< 0.05						

This table illustrated by figure (5) demonstrates that there is a statistically significant difference **(P<0.05)** between suffering from convulsions of congenital hydrocephalic infants **(7.6%)** and that of acquired group **(44%).**

Figure (5): Distribution of studied cases of hydrocephalus according to convulsions of infants

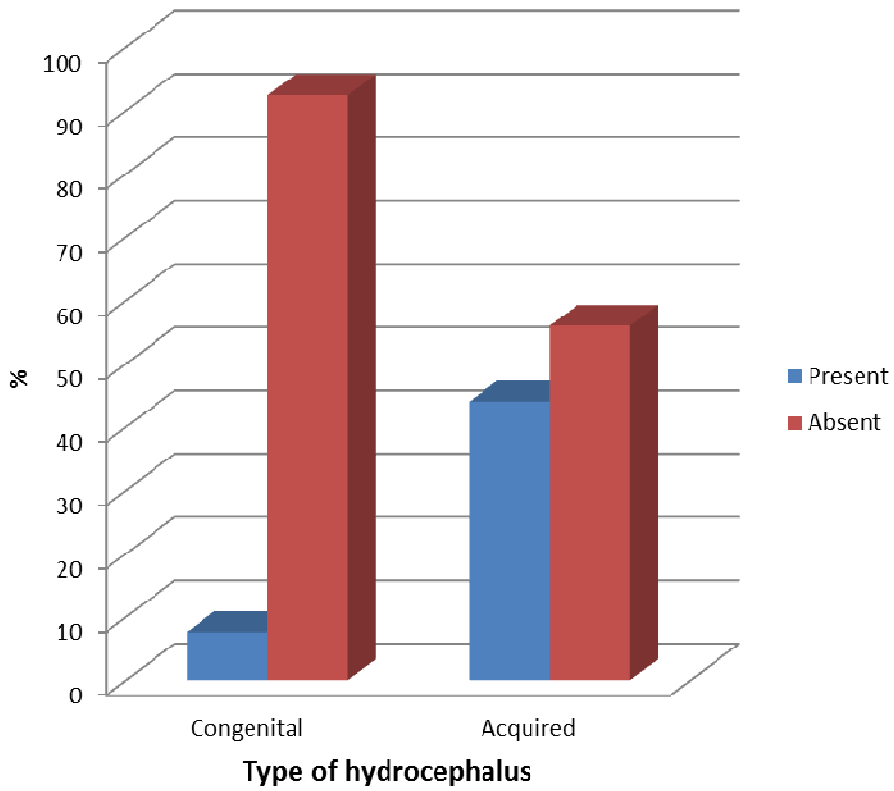

Table (20): Distribution of the studied cases of hydrocephalus according to disturbed consciousness of infants.

Type of hydrocephalus / Disturbed consciousness	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	٥	٦.٣	١٠	٤٠.0	١٥	١٤.٤
Absent	٧٤	٩٣.٧	١٥	٦٠.0	٨٩	٨٥.٦
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 17.44 P< 0.05						

This table illustrated by figure (6) shows that there is a statistically significant difference **(P<0.05)** between suffering from disturbed consciousness of congenital hydrocephalic infants **(٦.٣%)** and that of acquired group **(40%).**

Figure (6): Distribution of studied cases of hydrocephalus according to disturbed consciousness

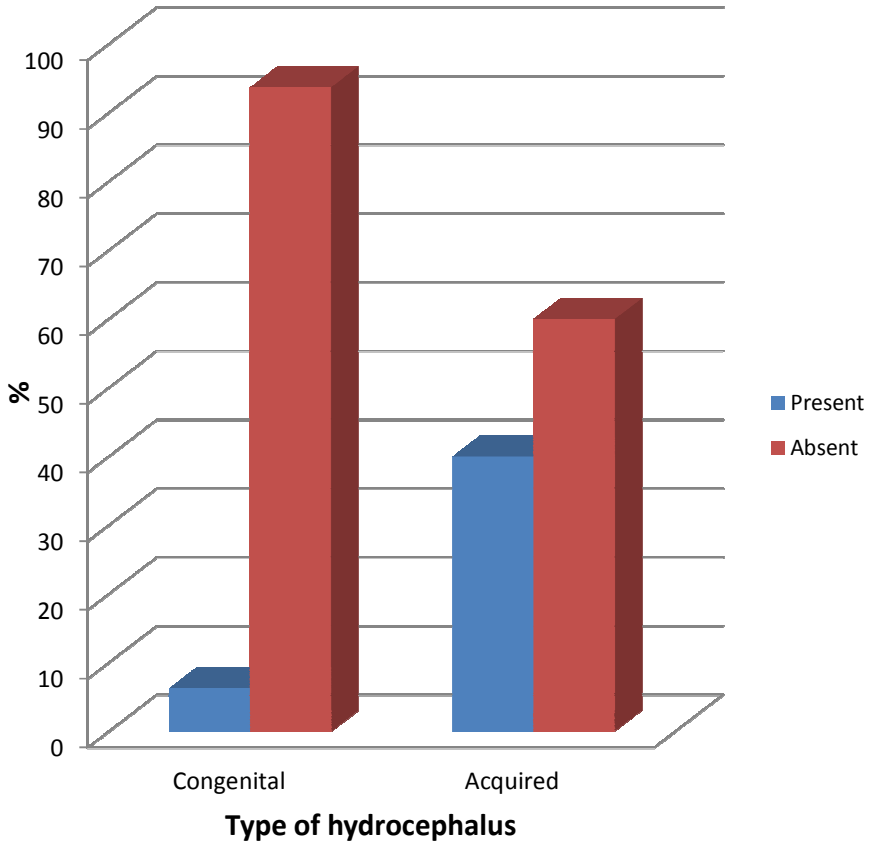

Table (٢١): Distribution of the studied cases of hydrocephalus according to head circumference percentile.

Type of hydrocephalus / Head circumference percentile	Congenital		Acquired		Total	
	No	%	No	%	No	%
Below normal	٧	٨.٩	٣	١٢.0	١٠	٩.٦
Normal	٣٩	٤٩.٤	١٦	٦٤.0	٥٥	٥٢.٩
Above normal	٣٣	٤١.٧	٦	٢٤.0	٣٩	٣٧.٥
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 2.7 P> 0.05						

The table illustrates that there is a statistically insignificant difference **(P>0.05)** between congenital hydrocephalic infants having above normal head circumference percentile **(٤١.٧%)** and that of acquired group **(24%).**

Table (22): Distribution of the studied cases of hydrocephalus according to size of anterior fontanel.

Type of hydrocephalus / Size of anterior fontanel	Congenital		Acquired		Total	
	No	%	No	%	No	%
Sever	١٦	٢٠.٣	٤	١٦.0	٢٠	١٩.٢
Above normal	٤٤	٥٥.٧	١٦	٦٤.0	٦٠	٥٧.٧
Normal	١٩	٢٤.١	٥	٢٠.0	٢٤	٢٣.١
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 0.465 P> 0.05						

This table demonstrates that there is a statistically insignificant difference (**P>0.05)** between congenital hydrocephalic infants having severely increased anterior fontanel size (**20.3%)** and that of acquired group **(16%)**.

Table (23): Distribution of the studied cases of hydrocephalus according to bulge of anterior fontanel.

Type of hydrocephalus / Bulge of anterior fontanel	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	٧٩	١٠٠.0	٢٤	٩٦.0	١٠٣	٩٩.0
Absent	٠	٠.0	١	٤.0	١	١.0
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 3.19 P> 0.05						

The table shows that there is a statistically insignificant difference (**P>0.05)** between congenital hydrocephalic infants showing bulge of anterior fontanel **(100%)** and that of acquired group **(96%).**

Table (24): Distribution of the studied cases of hydrocephalus according to pulsation of anterior fontanel.

Type of hydrocephalus / Pulsation of anterior fontanel	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	٧٥	٩٤.٩	١٧	٦٨.0	٩٢	٨٨.٥
Absent	٤	٥.١	٨	٣٢.0	١٢	١١.٥
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 11.38 P< 0.05						

The table illustrated by figure (7) shows that there is a statistically significant difference (**P<0.05)** between congenital hydrocephalic infants showing pulsation of anterior fontanel (**94.9%)** acquired group **(68%).**

Figure (7): Distribution of studied cases of hydrocephalus according to pulsation of anterior fontanel

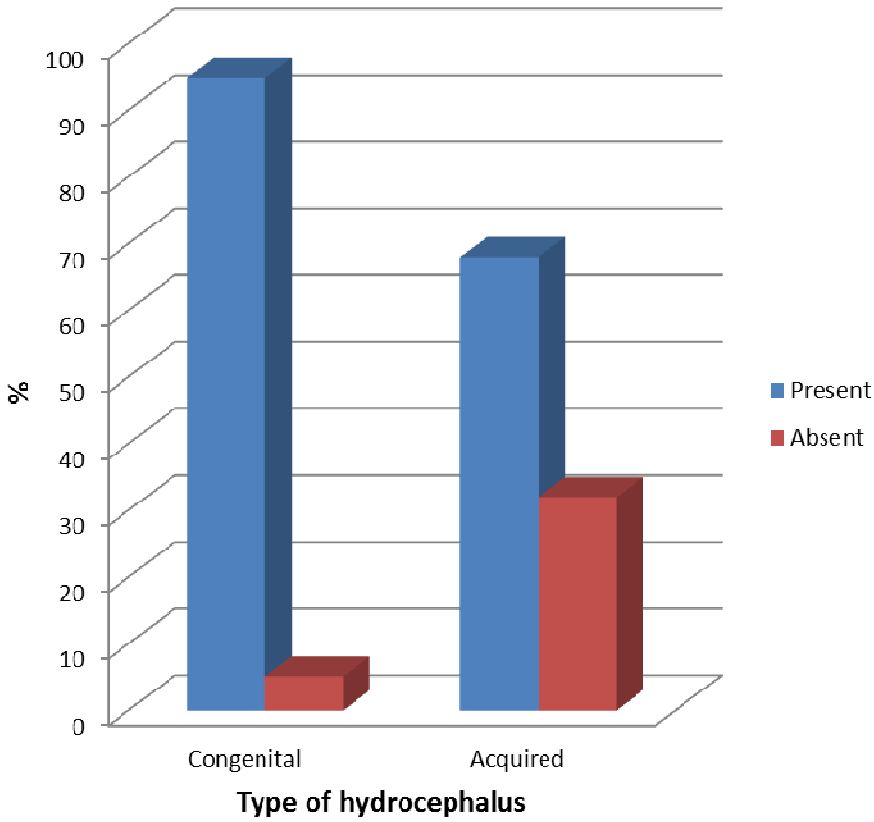

Table (25): Distribution of the studied cases of hydrocephalus according to the size of posterior fontanel.

Type of hydrocephalus / Size of posterior fontanel	Congenital		Acquired		Total	
	No	%	No	%	No	%
Above normal	٥٥	٦٩.٦	١٥	٦٠.0	٧٠	٦٧.٣
Normal	٢٤	٣٠.٤	١٠	٤٠.0	٣٤	٣٢.٧
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 0.799 P> 0.05						

This table demonstrates that there is a statistically insignificant difference (**P>0.05)** between congenital hydrocephalic infants having above normal posterior fontanel size **(69.6%)** and acquired group **(60%).**

Table (26): Distribution of the studied cases of hydrocephalus according to bulge of posterior fontanel.

Type of hydrocephalus / Bulge of posterior fontanel	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	٧٥	٩٤.٩	٢٢	٨٨.0	٩٧	٩٣.٣
Absent	٤	٥.١	٣	١٢.0	٧	٦.٧
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 1.456 P> 0.05						

The table illustrates that there is a statistically insignificant difference **(**P>٠.٠٥**)** between congenital hydrocephalic infants showing bulge of posterior fontanel **(94.9%)** and acquired group **(88%).**

Table (27): Distribution of the studied cases of hydrocephalus according to pulsation of posterior fontanel.

Type of hydrocephalus / Pulsation of posterior fontanel	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	٧٢	٩١.١	١٧	٦٨.0	٨٩	٨٥.٦
Absent	٧	٨.٩	٨	٣٢.0	١٥	١٤.٤
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 8.24 P< 0.05						

The table illustrated by figure (8) demonstrates that there is a statistically significant difference **(P<0.05)** between congenital hydrocephalic infants showing pulsation of posterior fontanel **(٩١.١%)** and acquired group **(68%).**

Figure (8): Distribution of studied cases of hydrocephalus according to pulsation of posterior fontanel

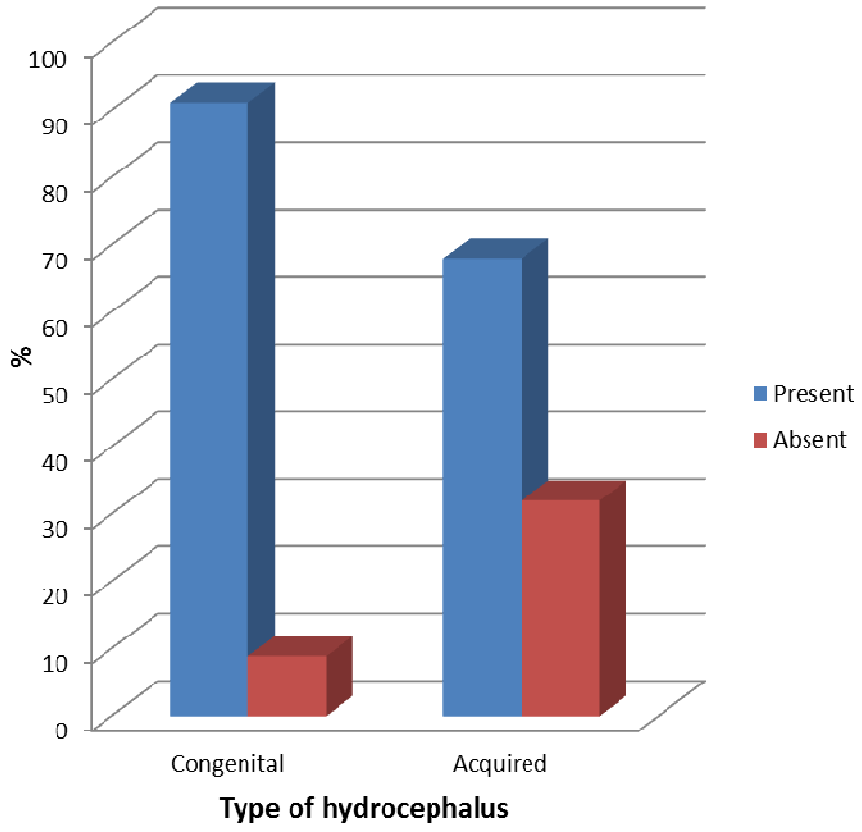

Table (28): Distribution of the studied cases of hydrocephalus according to presence of squint.

Type of hydrocephalus / Squint	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	٩	١١.٨	٣	١٢.0	١٢	١١.٥
Absent	٧٠	٨٨.٢	٢٢	٨٨.0	٩٢	٨٨.٥
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 0.007 P> 0.05						

The table shows that there is a statistically insignificant difference **(P>0.05)** between congenital hydrocephalic infants suffering from squint **(11.8%)** and acquired group **(12%).**

Table (29): Distribution of the studied cases of hydrocephalus according to results of examination of infantile back (spina bifida).

Type of hydrocephalus / Spina bifida	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	٣٩	٤٩.٤	٥	٢٠.0	٤٤	٤٢.٣
Absent	٤٠	٥٠.٦	٢٠	٨٠.0	٦٠	٥٧.٧
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 5.56 P< 0.05						

The table illustrated by figure (9) demonstrates that there is a statistically significant difference **(P<0.05)** between congenital hydrocephalic infants suffering from spina bifida **(49.4%)** and acquired group **(20%)**.

Figure (9): Distribution of studied cases of hydrocephalus according to examination of infantile back

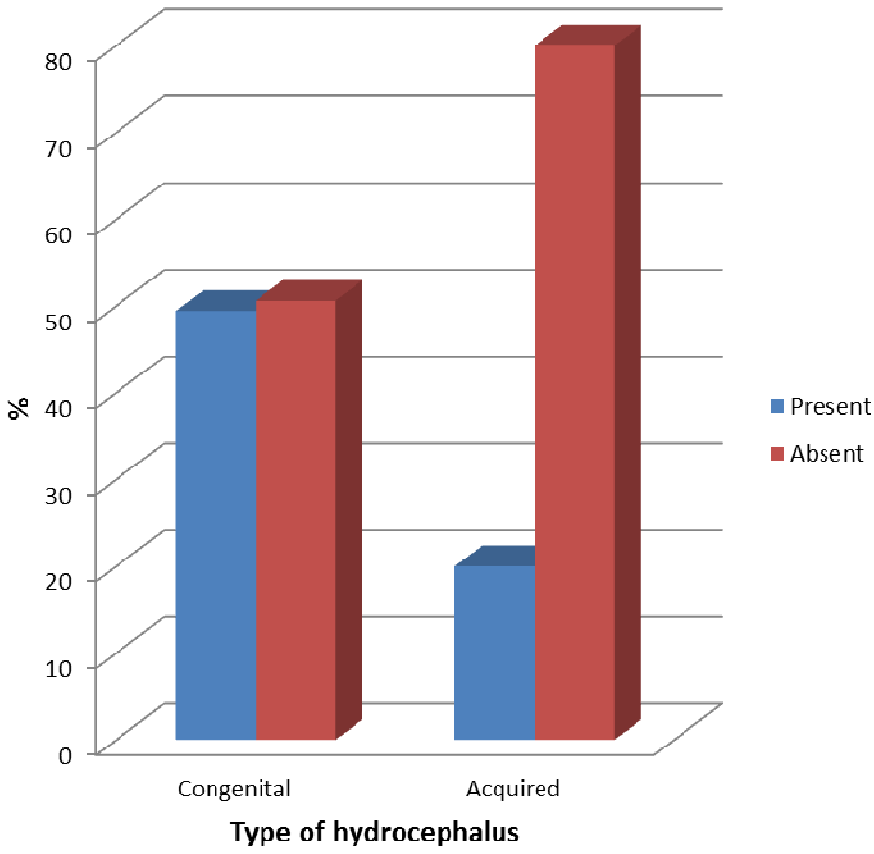

Table (30): Distribution of the studied cases of hydrocephalus according to infantile motor power.

Type of hydrocephalus / Motor power	Congenital		Acquired		Total	
	No	%	No	%	No	%
Good	٤٣	٥٤.٤	٢٢	٨٨.0	٦٥	٦٢.٥
Paresis	١٦	٢٠.٣	١	٤.0	١٧	١٦.٣
Paralysis	٢٠	٢٥.٣	٢	٨.0	٢٢	٢١.٢
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 8.97 P< 0.05						

This table illustrated by figure (10) shows that there is a statistically significant difference (**P<0.05)** between congenital hydrocephalic infants suffering from paralysis in lower limb **(25.3%)** and acquired group (**8%).**

Figure (10): Distribution of studied cases of hydrocephalus according to their motor power

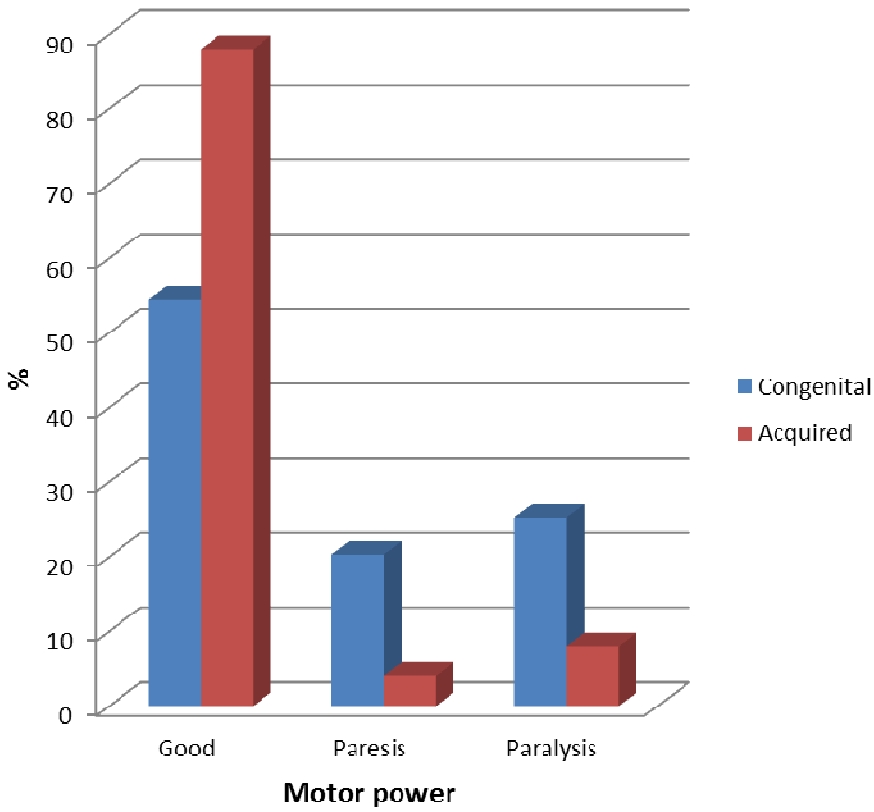

Table (31): Distribution of the studied cases of hydrocephalus according to the presence of other congenital anomalies.

Type of hydrocephalus / Other congenital anomalies	Congenital		Acquired		Total	
	No	%	No	%	No	%
Present	٤١	٥١.٩	٤	١٦.0	٤٥	٤٣.٣
Absent	٣٨	٤٨.١	٢١	٨٤.0	٥٩	٥٦.٧
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 8.56 P> 0.05						

This table demonstrates that there is a statistically insignificant difference (**P>0.05)** between congenital hydrocephalic infants have congenital anomalies other than hydrocephalus **(51.9%)** and acquired group **(16%)**.

IV-Investigations applied to the studied group:

Table (32): Distribution of the studied cases of hydrocephalus according to CT findings (the type of hydrocephalus).

Type of hydrocephalus / CT findings	Congenital		Acquired		Total	
	No	%	No	%	No	%
Communicating hydrocephalus	٢٣	٢٩.١	١٢	٤٨.0	٣٥	٣٣.٧
Obstructive hydrocephalus	٥٦	٧٠.٩	١٣	٥٢.0	٦٩	٦٦.٣
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 3.03 P> 0.05						

The table illustrates that there is a statistically insignificant difference (**P>0.05)** between congenital hydrocephalic infants suffering from obstructive hydrocephalus **(70.9%)** and acquired group **(52%).**

Table (33): Distribution of the studied cases of hydrocephalus according to MRI findings of infants.

Type of hydrocephalus / MRI findings	Congenital		Acquired		Total	
	No	%	No	%	No	%
Spinal meningiomyelocele	٣٠	٣٨.0	١	٤.0	٣١	٢٩.٨
Absent abnormalities	٤٩	٦٢.0	٢٤	٩٦.0	٧٣	٧٠.٢
Total	٧٩	١٠٠.0	٢٥	١٠٠.0	١٠٤	١٠٠.0
X2 = 10.48 P< 0.05						

The table illustrated by figure (11) demonstrates that there is a statistically significant difference **(P<0.05)** between congenital hydrocephalic infants having MRI spinal meningiomyelocele **(38%)** and acquired group **(4%)**.

Figure (11): Distribution of studied cases of hydrocephalus according to MRI finding