

RESULTS

RESULTS**A- CONGENITAL AND EARLY ACQUIRED EPIPHORA:**

The total number of eyes included in the study was one hundred ninety four eyes of one hundred thirty four patients.

Incidence of congenital epiphora in patients examined in Outpatient Ophthalmological Clinic in Benha University Hospital in one year "between August 1984 and July 1985":

- 1- Total number of patients examined 13292.
- 2- Total number of cases with congenital epiphora 92 patients.
- 3- Percentage 0.7%.

Table (1): Age of initial examination of the patients
studied in the outpatient clinic: *non-genital*
epiphora

Age	Number of cases	Percentage
First month	58	43.2
Second month	24	17.9
Third month	16	11.9
Fourth to sixth m.	12	9.0
Seventh to twelvethm	13	9.7
One to two years	3	2.2
Two to five years	6	4.5
Five to ten years	2	1.5
Total	134	100.0

distributed in
Sex incidence:

There were 69 male patients, representing 51.5% of cases and 65 female patients representing 48.5% of cases; so there were nearly an equal sex incidence.

distributed in
Family incidence:

Was reported in eleven cases representing 8.3% of cases.

Table (2): Laterality

Side affected	Number of cases	Percentage
Right	41	30.6
Left	33	24.6
Bilateral	60	44.8

- Bilateral cases were more common, while right side was slightly more affected than the left.

Bacteriological examination:**Table (3): Different organisms identified in congenital epiphora and their percentage.**

Type of organism	Number	Percentage
Pneumococci	18	20.7
Staphylococcus aureus	7	9.3
Streptococcus pyogens	5	5.7
Streptococcus viridans	5	5.7
Corynebacterium xerosis	4	4.6
Escherichia coli	3	3.5
Staphylococcus epidermidis	2	2.3
Pseudomonas aerogenosia	2	2.3
Diphtheroid bacilli	2	2.3
Mixed infection	5	5.7
Other types	8	9.1
No growth	26	29.9
Total	87	100.0

The most common organism was pneumococci, then staphylococcus aureus. No growth was revealed in 26 eyes representing 29.9%

Clinical Results:**1- MASSAGE****Table (4): Results of massage in relation to the age of the patients.**

Age	No. of eyes massaged	Successful eyes	Failed eyes	Percentage of success
First month	82	52	30	63.4
Second month	69	34	35	49.2
Third month	58	15	43	25.9
Fourth month	30	5	25	16.7
Fifth & Sixth month	25	1	24	4.0
Total	131	107	24	81.7

N.B.: Cases which had failed to respond to massage in the one month, continued massage at the following month. Failed cases were massaged at least for 6 weeks.

Table (5): The relation between the period of massage and its success rate.

Period of massage	Cured eyes within the period	Percentage from total eyes massaged
Two weeks	42	39.3
Three to Four weeks	37	34.6
Five to Six weeks	21	14.6
More than 6 weeks	7	6.5
Total	107	100.0

2- PROBING:

Table (6): The results of the probing in relation to the age of patients and number of probings.

Probing	Age	1st three months	3:6 months	6:12 months	1:2 years	2:5 years	5:10 years
First	Total	24	27	21	4	8	3
Probing	success no	24	24	10	1	2	0
	failure no	0	3	11	3	6	3
	% of success	100%	88.9%	47.6%	25%	25%	0.0%
Second	success no	--	3	5	1	--	--
Probing	% from total	--	11.1%	28.8%	25%	--	--
Third	success no	--	--	2	--	--	--
Probing	% from	--	--	9.6%	--	--	--
	Total						
	failure	--	--	4	2	6	3
	Total						
	success	24	27	17	2	2	--
% of total success		100%	100%	81%	50%	25%	0.0%

- All cases before the age of 3 months responded to the first probing.
- 11.1% of cases from 3 to 6 months needed a second probing.

- The results of probing diminished progressively after that age.

Total result of probing in relation to its number:

Total eyes probed were eighty seven eyes.

Table (7): The relation between the results of probing and its number.

Probing	Success no.	Percentage	Fail.	Percentage
First probing	61	70.1	26	29.9
Second probing	9	10.4	17	19.5
Third probing	2	2.3	15	17.2
Total	72	82.8	15	17.2

Relation between the number of probings to the successful cases:

Successful probing occurred in seventy two eyes

**Table (8): The relation between the number of probings
to the successful cases.**

Probing	No.	Precentage
First probing	61	84.6
Second probing	9	12.5
Third probing	2	2.9
Total	72	100.0

B- ACQUIRED EPIPHORA

1- Clinical data:

* Age incidence:

Table (9): The age incidence of acquired epiphora.

Age	10:20 years	21:40 years	More than 40 years	Total
Number	14	12	22	48
Percentage	29.2%	25.0%	45.8%	100%

- Most common incidence was in the fifth or later decades.
- Age of our cases ranged between four to seventy three years old.

Sex, Social and Family incidence:

- Seven cases were males, representing 14.6% of cases. Forty one cases were females representing 85.4% of cases. This indicates striking predilection to females.
- All of our cases were of low classes.
- Family incidence was reported in one case only.
- No special habits or occupational hazards were recorded by our patients.

Laterality:

Right side was affected in twenty three patients representing 48.7%, while the left side was affected in twenty patients representing 42.5% of cases. Bilateral incidence was present in five patients representing 9.8% of cases.

Radiological examination:**1- Plain X-ray:**

It was performed to forty one cases. Positive findings were present in thirteen cases; seven of them showed opaque paranasal sinuses. Hypertrophic rhinitis was reported in one case. Post-traumatic severely deviated septum was also reported in one case. Moderate deviation of the septum and anterior extension of the ethmoidal cells were reported in two cases each.

2- Dacryocystography:

It was performed to eighteen cases. It failed to show the canalicular system. It was done in cases of suspected additional pathology as in cases of intermittent severe distention of the sac, or functional epiphora. It was of utmost importance in diagnosis of the cause of failure in the failed cases.

Bacteriological examination:

Fifty six eyes were cultured.

Table (10): Different organisms identified in cases of acquired epiphora.

Type of organism	Number	Percentage
Pneumococci	16	28.6
Staphylococcus aureus	7	12.5
Staphylococcus epidermides	4	7.1
Streptococcus pyogens	4	7.1
Esherichia coli	3	5.4
Streptococcus vridans	2	3.6
Proteus mirabilis	2	3.6
Other types	7	12.5
No growth	11	19.6

- The most common organisms were pneumococci, then staphylococcus aureus. Most sterile cases were mucocœles.

Table (11): Morphological appearance of the sac during the operation.

Morphological finding	Number	Percentage
Distended sac with thick walls	17	38.6
Distended sac with friable thin walls.	9	20.5
Small sac with good lumen	6	13.6
Shrivelled, shrunken sac with obliterated lumen.	6	13.6
Obstructed internal punctum	4	9.1
Scattered mucosal reminance	2	4.6
Total	44	100.0

2- Results of different surgical procedures:

1- DACRYOCYSTECTOMY

Total eyes operated were eleven eyes.

Table (12): Subjective improvement of epiphora after dacrycystectomy.

Epiphora	Complete releif	Partial releif	No releif
Number	1	3	7
percentage	9.1%	27.3%	63.6%

- All cases were cured from infection.
- Cure of epiphora was assessed only subjectively in dacryocystectomy cases.
- Only 9.1% reported complete releif of epiphora, while 27.3% reported partial releif and 63.6% reported no releif.
- So our figures show that removal of the sac entirely cure infection, but has poor results in management of epiphora.

2- EXTERNAL DACRYOCYSTORHINOSTOMY:

Total operations performed were thirty five operations in thirty three eyes of thirty patients.

Table (13): Showing the objective and subjective tests of epiphora after different techniques of dacryocystorhinostomy.

Epiphora Procedure	Objective		Subjective		
	Physiological patency	anatomical patency	complete relief	partial relief	no. relief
Dupuy-Dutemps 11 eyes, (both flaps were sutured)	9	11	9	2	--
Percentage	81.8%	100%	81.8%	18.2%	0.0%
Traquair 11 eyes (one flap was sutured)	8	10	8	2	1
Percentage	72.7%	90.9%	72.7%	18.2%	9.1%
Traquair + Silastic intubation "12 eyes"	10	12	10	2	--
Percentage	83.3%	100%	83.3%	16.7%	
Total number	27	33	27	6	1
Total percentage 4 from 33 op.	77.1%	94.2%	77.1%	17.1%	5.7%

- Only one case was operated by the Toti technique and showed no improvement of epiphora and became anatomically impatent three months after the operation. It has no statistical significance.

Investigations of partially improved cases:

Table (14): Showing the cause of partial improvement after dacryocystorhinostomy by different techniques.

Cause	Number	Percentage
Post operative common canalicular		
stenosis	3	50.0%
Small bony opening	2	33.3%
Erosion of the puncti	1	16.7%

Investigation of cases ^{which} showed no improvement revealed:

- 1- One case showed complete common canalicular stenosis "done by Traquair procedure".
- 2- The other case showed complete closure of the bony fistula by granulation tissues "done by Toti technique".

3- CONJUNCTIVORHINOSTOMY:

Total eyes operated were ten eyes of ten patients.

Table (15): Showing objective and subjective testing of epiphora after conjunctivorhinostomy.

Type of the graft	Objective testing		Subjective testing		
	Physiological patency	Anatomical patency	Complete releif	Partial releif	No. releif
Saphenous vein	2	4	2	1	2
Graft "5 eyes"					
Percentage	40%	80%	40%	20%	40%
Umblical vein graft	3	4	3	1	1
"5 eyes"					
Percentage	60%	80%	60%	20%	20%
Total percentage	50%	80%	50%	20%	30%