

21 PREVALENCE AND FAMILY FIGURES

21.1 Prevalence of Blindness and Visual Impairment

The prevalence of childhood onset blindness is worked out on the basis of average population figures in each region in the period of the study (section 3). Numbers of patients in the relevant categories are found in Table 16-1.

Prevalence of svi/blindness and blindness per 100,000 is at least as follows:

		<u>Prevalence per 1000 Population</u>		
		<u>West Bank</u>	<u>Gaza Strip</u>	<u>Total</u>
SVI/Blindness	<16	28	28	30
	All ages	24	30	27
Blindness	<16	19	9	21
	All ages	18	22	20

Table 21-1: Prevalence of SVI and blindness in the West Bank and Gaza Strip

21.2 Prevalence of Common Conditions

The prevalence is worked out by combining the numbers of the patients registered and examined in the study with other affected members with the same condition extracted from the history and pedigree charts. The results are enumerated in Table 21-1 and denotes the prevalence per 100,000 population.

Hereditary Condition	WB	GS	All OPT
	Prevalence per 100,000 population		
Hereditary conditions	32	50	39
Congenital cataract	6	10	8
<16 years	10.5	12	13
Congenital glaucoma	3.6	6.4	5
Microphthalmos	1	3.8	2
Microphthalmos – total cases	3.5	5.8	4.4
Albinism	1.6	3.3	2.2
High myopia conditions	1	3.8	2
Retinal dystrophies All ages	13	17	15
Under 16	18	23	21
Cone degeneration	1	0.73	0.9
Cone-rod dystrophies	1	7.7	3.5
All progressive cone disorders	3.2	8.4	5
Congenital rod-cones	6.8	4	7.1
Rod-cone disorders	10.5	3.6	8.2
Rod monochromatism	1	4	2.2

M/R: Mortality rate.

Table 21-2: Prevalence of common blinding conditions in the study

21.3 Family Information

21.3.1 Prenatal and Postnatal Data in the Total Series

Data were collected from mothers on the prenatal history of all pregnancies including number of miscarriages, abortions and stillbirths. In addition, information were also gathered on the number of live birth and deceased siblings.

Family Data				
	Numbers	Average	M/F	M/R in %
Miscarriages Total	297	0.82	-	10.6
Hereditary cohort (286 sibships)	236	0.83	-	12.5
Non-Hereditary cohort (69 sibship)	54	0.8	-	11
All Prenatal mortality Total	358	1	-	12.8
Hereditary cohort	290	1	-	13.8
Non-Hereditary cohort	22	0.45	-	12.5
Total Live births	2443	6.6	1:1	-
Total gestations	2801	7.6	1:1	-
Alive siblings	2326	-	1:1	-
Postnatal mortality Total	320	0.8	0.8:1	12.7
Hereditary cohort	265	0.9	1.25:1	14.7
Non-Hereditary cohort	35	0.7	0.87:1	10
Affected Siblings Mortality	25 (3.5%) ^a	-	0.9:1	10 ^b
Hereditary cohort	37	-	1.25:1	13 ^b

^a Percentage from the total affected. M/R: mortality rate.

^b Percentage of deceased affected siblings form the total series.

Table 21-3: Gestation and birth rate in total sibships.

21.3.2 Birth Rate in the Clinical Conditions

Birth Rate in Clinical Conditions			
Condition	Numbers	Average	M/F
Gestations			
RCD	472	7.4	
Cone and CRD	268	6.9	
Achromatopsia	137	7.6	
Congenital Cataract	359	7.5	
Congenital Glaucoma	223	6.7	
Microphthalmos	140	7	
Albinism	79	8.8	
Other Syndromatic	171	7.4	
Live Births			
RCD	390	6	
Cone and CRD	247	6.5	
Congenital Cataract	343	7	
Congenital Glaucoma	220	6.7	
Achromatopsia	130	6.5	
Microphthalmos	25	1.25	
Albinism	75	8	
Other Syndromatic	140	6	
Living Siblings			
RCD	402	3.6	1.06:1
Cone and CRD	236	6	0.86:1
Congenital Cataract	325	7	0.6:1

Condition	Numbers	Average	M/F
Congenital Glaucoma	195	6	1.25:1
Achromatopsia	121	6.7	0.7:1
Microphthalmos	113	6	1.6:1
Albinism	72	8	0.8:1
Other Syndromatic	144	6.3	5:1

Table 21-3: Prenatal and postnatal mortality rates by condition.

21.3.3 Prenatal and Postnatal Mortality in the Clinical Conditions

Sibships Data in Clinical Conditions				
	Numbers	Average	M/F	M/R %
Miscarriages				
RCD	72	1.1	-	15.3
Cone and CRD	22	0.6	-	8.2
Congenital Cataract	30	0.65	-	8.4
Congenital Glaucoma	25	0.76	-	11
Achromatopsia	10	0.6	-	7.3
Microphthalmos	25	1.25	-	18
Albinism	6	0.7	-	7.6
Other Syndromatic	27	1.1	-	15.8
Total Prenatal Mortality				
RCD	82	1.3	-	17.4
Cone and CRD	32	0.8	-	11.9
Congenital Cataract	34	0.7	-	9.5

	Numbers	Average	M/F	M/R %
Congenital Glaucoma	28	0.85	-	12.6
Achromatopsia	16	0,9	-	11.7
Microphthalmos	25	1.25	-	18
Albinism	7	0.7	-	8.9
Other Syndromatic	31	1.3	-	18
Postnatal Mortality				
RCD	59	0.9	1:1	11.3
Cone and CRD	40	1	0.9:1	14.5
Congenital Cataract	54	1.1	1.9:1	14
Achromatopsia	17	0.9	1:1	12.3
Congenital Glaucoma	24	0.73	1.25:1	11
Microphthalmos	13	0.6	0.9:1	10.3
Albinism	13	1.4	1:1	15.3
Other Syndromatic	13	0.6	1.2:1	8.3
Affected Siblings Deceased				
RCD	12	0.2	2:1	18.8
Cone and CRD	3	0.1	0.5:1	7.7
Congenital Cataract	1	-	-	2
Congenital Glaucoma	6	0.2	0.7	18.2
Achromatopsia	0	0	0	0
Microphthalmos	4	0.2	1:1	20
Albinism	4	0.4	1:1	44.4
Other Syndromatic	2	0.09	1:1	8.7

21.4 Mortality in Patients in the Total Series.

From the total number of 669, 4 patients died during the 2-years period of the study. Two of them died of metastatic retinoblastoma and 2 in their first two years of life from failure to thrive.

The figure gathered from the history on the number of affected patients not examined who died was 25 cases. This together with the four who died during the study make up a 4.2% mortality rate in the blind population.

21.5 Figures And Ratios In The Non-Hereditary Conditions

	Prenatal	Perinatal	Postnatal	Total
No. of sibships studies	22	7	38	69
Total gestations	173	46	303	535
Average gestations per sibship	7.2	5.7	5.5	6
Total siblings	137	51	248	427
Average siblings per family	6.2	4.2	5.5	6
Total number of patients	24	10	55	90
Sibships with details known	21	8	38	67
Prenatal mortality rate %	10	10	12	12.5
Postnatal mortality rate %	7	19.5	10	10

Tables 21-9: Figures and ratios in sibships of patients with non-hereditary conditions including prenatal and postnatal mortality rates.