

Table 1 Characteristics of vertical strabismus in the study participants

Variable	Total (n = 265)		Males (n = 130)		Females (n = 135)	
	No.	%	No.	%	No.	%
Deviation type						
Pure vertical	51	19.2	24	18.5	27	20.0
Combined horizontal and vertical						
With esotropia	135	50.9	62	47.7	73	54.1
With exotropia	79	29.8	44	33.8	35	25.9
Type of vertical strabismus						
Hypertropia						
Bilateral	103	38.9	51	39.2	52	38.5
Right	88	33.2	42	32.3	46	34.1
Left	52	19.6	25	19.2	27	20.0
Hypotropia						
Bilateral	2	0.8	1	0.8	1	0.7
Right	8	3.0	5	3.8	3	2.2
Left	12	4.5	6	4.6	6	4.4
Refractive errors						
Hyperopia	85	32.1	41	31.5	44	32.6
Myopia	45	17.0	21	16.2	24	17.8
Astigmatism	30	11.3	14	10.8	16	11.9
None	105	39.6	54	51.0	51	39.6
Family history of vertical strabismus	66	24.9	-	-	-	-
Cause of vertical strabismus						
Acquired	45	17.0	28	21.5	17	12.6
Trauma	19	7.2	16	12.3	3	2.2
Paralytic	14	5.3	6	4.6	8	5.9
Other	12	4.5	6	4.6	6	4.4
Congenital	220	83.0	102	78.5	118	87.4
Primary muscle overaction	150	56.6	73	56.2	77	57.0
Dissociated vertical deviation	27	10.2	12	9.2	15	11.1
Paralytic	19	7.2	8	6.2	11	8.1
Brown syndrome	5	1.9	2	1.5	3	2.2
Congenital fibrosis.	2	0.8	1	0.8	1	0.7
Other	17	6.4	6	4.6	11	8.1
Muscles involved						
Inferior oblique overaction	192	72.5	94	72.3	98	72.6
Superior oblique palsy	31	11.7	15	11.5	16	11.9
Superior rectus overaction	27	10.2	12	9.2	15	11.1
Other	15	5.7	9	6.9	6	4.4