

Supplementary Table 2. Hazard Ratios (HR), 95% Confidence Intervals (CI), and P-values for first-time glaucoma drainage device (GDD) failures and complications as well as second-time GDD failures in pediatric eyes

Variable	Groups Compared	First-Time GDD Failure				First-Time GDD Complications				Second-Time GDD Failure			
		Hazard Ratio	HR 95% CI		p - value	Hazard Ratio	HR 95% CI		p - value	Hazard Ratio	HR 95% CI		p - value
			low	high			low	high			low	high	
Categorical Variables	HR is for a change from the first category to the second category												
Eye	Right to Left	1.3	0.71	2.5	0.37	1.1	0.56	2.0	0.85	0.48	0.12	1.9	0.30
Sex	Male to Female	1.1	0.46	2.6	0.85	1.4	0.73	2.7	0.31	0.42	0.090	2.0	0.27
Race/Ethnicity	African American to Caucasian, Non-Hispanic	0.99	0.15	6.3	0.99	5.9	0.69	50	0.11	7.0	0.12	43 x 10 ^{^1}	0.35
	African American to Hispanic American	1.2	0.25	5.8	0.82	6.0	0.76	47	0.089	6.7	0.21	220	0.28
	African American to Asian American	No Asian-American Failures				3.9	0.23	69	0.35	No Asian-American Failures			
	Caucasian, Non-Hispanic to Hispanic American	1.2	0.29	5.1	0.79	1.0	0.40	2.6	0.98	0.95	0.040	23	0.98
	Caucasian, Non-Hispanic to Asian American	No Asian-American Failures				0.67	0.080	6.0	0.72	No Asian-American Failures			
	Hispanic American to Asian American	No Asian-American Failures				0.66	0.083	5.3	0.70	No Asian-American Failures			
Concurrent Procedure	No to Yes	1.1	0.45	2.6	0.86	0.85	0.42	1.7	0.66	2.6	0.74	8.7	0.14
	NONE to Retina Procedure Only	0.74	0.21	2.6	0.64	1.0	0.40	2.5	0.99	1.9	0.33	11	0.48
	NONE to Retina + Anterior Segment Procedure	1.4	0.37	5.4	0.62	0.73	0.22	2.5	0.62	No Retina + Anterior Segment Failures			
	NONE to Anterior Segment Procedure	2.7	0.23	32	0.42	1.1	0.14	8.1	0.96	1.4	0.23	7.9	0.73
	NONE to Glaucoma-Related Surgery ± Anterior Segment Surgery	1.2	0.18	7.5	0.88	0.50	0.066	3.7	0.50	13	1.9	93	0.0085**
	Retina Procedure Only to Retina + Anterior Segment Procedure	1.9	0.36	10	0.44	0.74	0.18	3.0	0.67	No Retina + Anterior Segment Procedures			
	Retina Procedure Only to Anterior Segment Procedure	3.7	0.26	52	0.33	1.1	0.12	9.2	0.96	0.73	0.090	5.9	0.76
	Retina Procedure Only to Glaucoma-Related Surgery ± Anterior Segment Surgery	1.6	0.18	13	0.68	0.50	0.059	4.2	0.52	7.2	0.82	63	0.075
	Retina + Anterior Segment Procedure to Anterior Segment Procedure	1.9	0.13	28	0.63	1.4	0.14	14	0.76	No Retina + Anterior Segment Procedure Failure			
	Retina + Anterior Segment Procedure to Glaucoma-Related Surgery ± Anterior Segment Surgery	0.82	0.090	7.3	0.86	0.68	0.069	6.7	0.74	No Retina + Anterior Segment Procedure Failure			
	Anterior Segment Procedure to Glaucoma-Related Surgery ± Anterior Segment Surgery	0.42	0.020	8.5	0.57	0.47	0.028	7.8	0.60	9.9	0.96	10 x 10 ^{^1}	0.054
Type of Glaucoma	Glaucoma following cataract surgery vs. Glaucoma associated with non-acquired systemic disease or syndrome	3.0	0.67	13	0.15	0.53	0.13	2.1	0.36	2.4	0.060	93	0.63

Variable	Groups Compared	First-Time GDD Failure				First-Time GDD Complications				Second-Time GDD Failure			
		Hazard Ratio	HR 95% CI		p - value	Hazard Ratio	HR 95% CI		p - value	Hazard Ratio	HR 95% CI		p - value
			low	high			low	high			low	high	
	Glaucoma following cataract surgery vs. Glaucoma associated with non-acquired ocular anomalies	2.9	0.68	12	0.15	1.0	0.34	3.0	0.99	34	0.47	25 x 10 ²	0.11
	Glaucoma following cataract surgery vs. Glaucoma associated with acquired condition	0.24	0.040	1.3	0.10	0.74	0.27	2.0	0.56	No Failures with diagnosis Glaucoma associated with acquired condition			
	Glaucoma following cataract surgery vs. Primary Congenital Glaucoma	1.3	0.37	4.7	0.67	0.64	0.24	1.7	0.37	0.98	0.020	49	0.99
	Glaucoma following cataract surgery vs. Juvenile Open Angle Glaucoma	4.4	0.24	81	0.32	1.3	0.15	12	0.79	No Failures with diagnosis Juvenile Open Angle Glaucoma			
	Glaucoma associated with non-acquired systemic disease or syndrome vs. Glaucoma associated with non-acquired ocular anomalies	0.97	0.21	4.6	0.97	1.9	0.46	8.0	0.37	14	0.51	39 x 10 ¹	0.12
	Glaucoma associated with acquired condition vs. Glaucoma associated with non-acquired systemic disease or syndrome	12	2.0	74	0.0063**	0.71	0.18	2.9	0.63	No Failures with diagnosis Glaucoma associated with acquired condition			
	Glaucoma associated with non-acquired systemic disease or syndrome vs. Primary Congenital Glaucoma	0.44	0.11	1.8	0.25	1.2	0.31	4.7	0.78	0.40	0.020	7.9	0.55
	Glaucoma associated with non-acquired systemic disease or syndrome vs. Juvenile Open Angle Glaucoma	1.5	0.080	29	0.80	2.6	0.23	29	0.45	No Failures with diagnosis Juvenile Open Angle Glaucoma			
	Glaucoma associated with acquired condition vs. Glaucoma associated with non-acquired ocular anomalies	12	2.0	68	0.0054**	1.4	0.46	4.1	0.58	No Failures with diagnosis Glaucoma associated with acquired condition			
	Glaucoma associated with non-acquired ocular anomalies vs. Primary Congenital Glaucoma	0.45	0.12	1.7	0.25	0.63	0.22	1.8	0.39	0.030	0.00	1.0	0.053
	Glaucoma associated with non-acquired ocular anomalies vs. Juvenile Open Angle Glaucoma	1.5	0.080	29	0.78	1.3	0.14	13	0.80	No Failures with diagnosis Juvenile Open Angle Glaucoma			
	Glaucoma associated with acquired condition vs. Primary Congenital Glaucoma	5.4	1.1	27	0.041**	1.2	0.43	3.2	0.77	No Failures with diagnosis Glaucoma associated with acquired condition			
	Glaucoma associated with acquired condition vs. Juvenile Open Angle Glaucoma	18	0.83	39 x 10 ¹	0.066	1.8	0.20	17	0.60	No Failures with diagnosis Juvenile Open Angle Glaucoma			
	Primary Congenital Glaucoma vs. Juvenile Open Angle Glaucoma	3.4	0.19	59	0.41	2.1	0.23	19	0.51	No Failures with diagnosis Juvenile Open Angle Glaucoma			
Phakic Status	No to Yes	1.4	0.61	3.4	0.40	0.95	0.49	1.8	0.87	0.64	0.13	3.1	0.58
Type of Implant	Ahmed to Baerveldt	0.82	0.33	2.0	0.66	1.4	0.62	3.4	0.40	1.6	0.13	20	0.72
Tube Location	Anterior Chamber to Sulcus	1.5	0.36	6.1	0.59	0.85	0.25	2.9	0.80	7.2	0.65	79	0.11

Variable	Groups Compared	First-Time GDD Failure				First-Time GDD Complications				Second-Time GDD Failure			
		Hazard Ratio	HR 95% CI		p - value	Hazard Ratio	HR 95% CI		p - value	Hazard Ratio	HR 95% CI		p - value
			low	high			low	high			low	high	
	Anterior Chamber to Pars Plana	0.79	0.30	2.1	0.65	0.74	0.33	1.7	0.47	2.4	0.39	14	0.35
	Sulcus to Pars Plana	0.54	0.11	2.5	0.43	0.87	0.22	3.4	0.84	0.33	0.020	4.5	0.41
Age Less than 1 Year Old	Older to Younger Age	1.6	0.67	3.8	0.29	1.7	0.89	3.3	0.10	27	2.7	27 x 10 ^{^1}	0.0053**
Age Less than 2 Years Old	Older to Younger Age	2.2	0.89	5.3	0.088	1.9	1.0	3.7	0.046**	1.7	0.27	10	0.58
Age Less than 3 Years Old	Older to Younger Age	2.0	1.0	4.9	0.14	2.1	1.1	4.0	0.024**	0.98	0.22	4.4	0.98
Continuous Variables	Hazard Ratio is for this many units increase												
Age at Surgery	Unit = 3 Years	0.77	0.61	0.98	0.034**	0.87	0.73	1.0	0.14	0.94	0.61	1.5	0.78
Pre-Operative IOP	Unit = 5 mmHg	1.2	0.97	1.5	0.086	1.2	1.0	1.5	0.038**	0.68	0.39	1.2	0.17
Pre-Operative Number of Glaucoma Medications	Unit = 1 medication	0.74	0.51	1.1	0.11	1.0	0.72	1.5	0.87	0.89	0.53	1.5	0.67
Vision at Surgery (LogMar)	Unit = 1 logMar	1.5	0.73	3.2	0.26	1.1	0.49	2.3	0.89	2.6	0.53	13	0.24

Footnote:

- A p-value < 0.05 was considered statistically significant (**)
- The single Molteno tube in the study was removed from analyses comparing Ahmed to Baerveldt, but included elsewhere.