

On-line Table 1: Demographic information for the participants in the control group (n = 18)

Study ID	Sex	Scanner ^a	Age at MRI (mo)	Age at NP (mo)	Days Btw_ MRI_ NP	Signs and Symptoms ^b	Etiology
CTL_01	F	GE2	3.85	4.45	18	Cross-eyed, r/o abnormality	Normal; tiny pars intermedia cyst
CTL_02	F	GE2	2.99	3.89	27	Hearing loss	Normal; unremarkable inner ear structure
CTL_03	M	GE1	55.04	55.81	23	Scoliosis	Normal
CTL_04	M	GE1	11.05	11.85	24	Low-lying cerebellar tonsils, r/o Chiari	Normal; criteria for Chiari I absent
CTL_05	F	GE2	53.69	54.39	21	Headaches	Normal
CTL_06	M	GE2	2.86	3.13	8	Congenital torticollis	Normal; mild prominence of the extra-axial CSF spaces
CTL_07	M	GE1	48.69	49.37	20	Headaches	Normal
CTL_08	M	GE1	15.68	16.11	13	Congenital torticollis	Normal
CTL_09	F	GE1	47.05	47.62	17	Headaches	Normal
CTL_10	F	GE1	41.65	42.52	26	Headaches	Normal
CTL_11	F	GE1	68.05	69.63	47	Headaches	Normal
CTL_12	M	GE1	60.39	60.79	12	Headaches	Normal
CTL_13	M	GE1	13.12	13.82	21	Central sleep apnea	Normal; paranasal sinus findings
CTL_14	M	GE2	39.55	No NP	No NP	Single seizure	Normal
CTL_15	F	GE2	54.21	55.08	26	Headaches	Normal; sinus disease
CTL_16	F	GE1	47.57	48.30	21	Single seizure	Normal; paranasal sinus findings
CTL_17	F	GE1	20.17	20.17	0	Uses left hand more than right	Mild prominence of lateral and third ventricles
CTL_18	F	GE2	No scan	67.94	No scan	Headaches	Normal

Note:—ID indicates identification; CTL, control; Btw, between; NP, neuropsychological data; r/o, rule out; No NP, neuropsychological data not acquired for ABAS-II.

^a GE1 indicates General Electric MRI 1; GE2, General Electric MRI 2.

^b Reason for the referral for MRI.

On-line Table 2: Demographic information for the participants in the hydrocephalus group (n = 24)

Patient	Sex	Scanner ^a	Age at MRI (mo)	Age at NP (mo)	Days Btw_ MRI_ Surgery	Days Btw_ MRI_ NP	Signs and Symptoms	Etiology
HCP_01	M	GE2	25.61	25.61 ^b	2	65 ^b	Rapidly ↑ HC, macrocephaly	Aqueductal stenosis
HCP_02	M	GE2	0.36	No NP	1	No NP	Rapidly ↑ HC, poor weight gain, feeding problems	Aqueductal stenosis
HCP_03	F	GE2	0.62	No NP	3	No NP	Identified in utero by fetal sonography/MRI	Intraventricular hemorrhage
HCP_04	F	GE2	5.92	5.95	1	1	Rapidly ↑ HC, macrocephaly, sunsetting eyes	Transepndymal flow
HCP_05	M	GE2	28.87	28.87	0	0	Vomiting, constipation, lethargy, poor balance	Fourth Ventricle outlet obstruction
HCP_06	M	Avanto	8.28	7.95	0	-10 ^c	Developmental delays, ↑ OFC	IVH
HCP_07	M	Avanto	1.61	1.64	1	1	Irritability, ↑ OFC	Posterior fossa cyst
HCP_08	M	Avanto	0.03	0.3	13	8	Macrocephaly, splayed sutures	Obstructive hydrocephalus
HCP_09	M	Avanto	38.47	38.50	1	1	Headaches	Arachnoid cyst
HCP_10	M	Avanto	0.07	No NP	2	No NP	Macrocephaly	Aqueductal stenosis
HCP_11	M	Avanto	0.03	No NP	7	No NP	Bulging fontanelle, splayed sutures, ↑ OFC	Congenital hydrocephalus
HCP_12	M	Avanto	0.00	No NP	1	No NP	Macrocephaly	Aqueductal stenosis
HCP_13	F	Avanto	10.81	10.81	1	0	Macrocephaly, developmental delays	Suprasellar/Third ventricular arachnoid cyst
HCP_14	M	GE2	4.44	No NP	22	No NP	Rapidly ↑ HC, head swelling, vomiting, fussy	Communicating HCP
HCP_15	F	GE2	0.10	No NP	1	No NP	Identified in utero by fetal sonography/MRI	Aqueductal stenosis
HCP_16	M	-	No scan	43.69	-	-	Nystagmus, Perinaud syndrome, headaches, macrocephaly, vomiting	Unknown
HCP_17	F	-	No scan	9.99	-	-	Rapidly ↑ HC, macrocephaly	Grade III IVH, prematurity
HCP_18	M	-	No scan	15.09	-	-	Rapidly ↑ macrocephaly	Obstructive HCP, unknown etiology
HCP_19	M	-	No scan	2.27	-	-	Rapidly ↑ HC, worsening ventriculomegaly	Aqueductal stenosis
HCP_20	M	-	No scan	50.93	-	-	↑ HC, macrocephaly, speech delays, falling, headache, vomiting, lethargy, irritability	Communicating HCP
HCP_21	M	-	No scan	1.05	-	-	Rapidly ↑ HC, full fontanelle	Communicating HCP
HCP_22	M	-	No scan	16.73	-	-	Eye deviations/jerks, ventriculomegaly	Obstructive HCP, porencephalic cyst; grade IV IVH
HCP_23	M	-	No scan	16.34	-	-	Developmental delays	Aqueductal stenosis
HCP_24	F	-	No scan	19.27	-	-	Macrocephaly	Suprasellar arachnoid cyst

Note:—HCP indicates hydrocephalus; Btw, between; NP, neuropsychological data; No NP, neuropsychological data not acquired for ABAS-II; HC, head circumference; OFC, occipital-frontal circumference.

^a GE2 indicates General Electric MRI 2; Avanto, Siemens; No scan, preoperative scan was acquired under the study protocol.

^b NP was performed 2 months after the surgery. Parents were instructed to fill out the questionnaire on the basis of the patient's functioning prior to surgery.

^c NP test was performed before the MRI.