

On-line Table. Seventeen cases of PHACES association

Patient No./Sex	Hemangioma	Structural		Cerebrovascular	Neurologic Sequelae	Cardiovascular	Eye	Ventral Anomaly	Other
		Malformation	Structural						
1/Female	S1-S4	L cerebellar hypoplasia; cerebellar dysplasia L > R; polygyric L occipital cortex		Tortuous and narrowed L ICA; tortuous basilar artery; pial enhancement of anterior pons and superior L cerebellum	N	N	N	Sternal indentation; duplicated ossification of sternal centers; clefting nares, philtrum, upper lip ipsilateral to hemangioma	N
2/Male	S1-S4	Dandy-Walker malformation; R cerebellar hypoplasia; agenesis of corpus callosum; cerebellar dysplasia with polymicrogyria; L posterior parietal cleft		Absent intracranial R ICA; tortuous PcomA	R hearing loss; hydrocephalus requiring VP shunt; global dev. delay; R visual loss; axial hypotonia	N	N	Cleft soft palate	L inguinal hernia
3/Male	S1-S4	Dandy-Walker variant; L cerebellar hypoplasia; prominent Meckel cave		Hypoplastic L A1 ACA segment; mild narrowing of L ICA at origin	N	N	N	Cleft lip	N
4/Female	S1-S3	L cerebral atrophy; L cortical dysplasia with pachygyria; focal nodular heterotopia in L parietal lobe; hypoplastic L cerebellar hemisphere; Dandy-Walker variant		Anomalous vessel at petrous segment of L ICA	Seizure at 6 weeks; global dev. delay (language > motor); conductive hearing loss on L	N	N	N	N
5/Female	S3	N		N	N	N	N	Sternal skin tag	Liver hemangiomas; subglottic hemangioma
6/Female	S3	N		N	N	N	N	Tetralogy of Fallot, R aortic arch;	Hypopigmented midline; sternal skin tag
7/Female	S1-S3	Dandy-Walker variant; R cerebellar hypoplasia		L PCA aneurysm; embryologic vessels (scapular artery b/, prostatic), aberrant ICA course b/; tortuous R ICA	Dev. delay	VSD R aortic arch	R cataract contralateral to facial hemangioma	Congenital hypothyroidism	Subglottic hemangioma
8/Female	S3	N		N	N	Common brachiocephalic trunk variant	N	Sternal hemangiomas; sinus track over sternum	Upper airway hemangioma
9/Female	S1, S4	N		N	N	L subclavian artery from descending aorta	N	Sternal skin tag; hypersegmented sternum	N
10/Female	S3	N		N	N	N	N	Sternal skin tag; supraumbilical raphe; duplication of ossification centers	N
11/Female	S1	N		Persistent L trigeminal artery; L A1 ACA segment hypoplasia; basilar artery narrowing	N	N	N	N	N
12/Female	S2, S3	N		Tortuous L common carotid artery; tortuous and ectatic; L ICA, L PcomA, L PCA, vertebrabasilar system, R PCA; hypoplasia and tortuous A1 ACA segment	Mild gross motor delay	Mild diminution of aortic arch	N	Irregular ossification center and no center for 4th sternal segment; midline hypopigmentation	Subglottic hemangioma
13/Female	S1, S2	Hypoplastic corpus callosum; L temporal horn prominence; R perisylvian arachnoid cyst		Tortuous L carotid artery; anomalous vessel from distal R ICA; intracranial hemangioma anterior to R cerebral peduncle; multiple anomalous vessels near intracranial hemangiomas; pial enhancement of R temporal lobe	N	N	N	Clefting nares, philtrum, upper lip ipsilateral to hemangioma	N
14/Female	S1, S2	R cerebellar hypoplasia and dysplasia; Dandy-Walker variant; heterotopia in R cerebellum		Absent R ICA; anomalous vessel from R PCA	Seizure at 4 years	N	N	N	N
15/Female	S3	N		Tortuous vertebral artery b/; hypoplasia of L A1 ACA; mild narrowing of L ICA;	N	N	N	N	N
16/Female	S1-S4	L posterior fossa asymmetry; prominence of L Meckel cave		Low bifurcation of L carotid artery; tortuous and dysplastic L ICA and distal basilar artery; anomalous tortuous vessel from basilar artery	N	N	N	N	N
17/Female	S1-S4	N		Small L ICA; hypoplasia of L A1 ACA	N	N	Morning glory disk anomaly contralateral to facial hemangioma	N	N

Note:—N indicates none; dev., developmental; L, left; R, right; PcomA, posterior communicating artery; VP, ventriculoperitoneal; VSD, ventricular septal defect; PCA, posterior cerebral artery; b/, bilateral; ACA, anterior cerebral artery; ICA, internal carotid artery.