

Ref.	Case number	Age/sex	Culprit vessel	Vascular anomaly	Clinical Presentation	Past history	Treatment/outcome
Boeri <i>et al</i> ^[1] , 1964	2	NA	BA	Megadolichobasilar variation	Both showed intrinsic and extrinsic ophthalmoparesis	NA	NA
Hopkins <i>et al</i> ^[2] , 1973	1	81/F	Left PCA	Moderate dilatation and tortuosity	Abrupt left retrobulbar pain, diplopia, and ptosis	Hypertension	NA
Scotti <i>et al</i> ^[3] , 1974	2	61/M	Left PCA	Tortuous	Anisocoria, left diplopia, ptosis and headache	None	Spontaneous improvement but mild residual diplopia
		55/M	Right PCA	Tortuous	2 yr, right diplopia, ptosis and headache	Migraine	NA

Imes <i>et al</i> ^[4] , 1984	1	31/M	Left PCA	None	25 yr,	None	ophthalmoplegia and migraines	No intervention and no improvement
Morimoto <i>et al</i> ^[5] , 1985	1	61/F	Left PCA	Atherosclerosis	Anisocoria,	left ptosis and partial ophthalmoplegia	Obse	No intervention and no improvement
Smoker <i>et al</i> ^[6] , 1986	1	NA	BA, right SCA and PCA	Abnormal position	Right pupil-involving and ophthalmoplegia	NA	NA	NA
D'Andrea <i>et al</i> ^[7] , 1992	1	58/M	BA	Dolichoectasia	Ophthalmoplegic migraine	NA	NA	NA
Zingale <i>et al</i> ^[8] , 1993	1	22/F	Trigeminal artery	None	Anisocoria, ophthalmoplegia and strabismus	Ophthalmoplegic migraine	Conservative treatment with decadron and improved over 15 d with mild residual diplopia	

Hashimoto <i>et al</i> ^[9] , 1998	1	76/F	BA	Atherosclerotic deformation	Right partial ophthalmoplegia and pupillomotor paresis	NA	NA
Tilikete <i>et al</i> ^[10] , 2000	1	67/M	BA	Dolichoectasia	1 mo, right diplopia and an esodeviation of the right eye	Abdominal aortic aneurysm and coronary heart disease	Carbamazepine and ineffective
Versino <i>et al</i> ^[11] , 2005	1	45/F	Left PCA	None	Left diplopia	NA	Carbamazepine and improved a few days
Albayram <i>et al</i> ^[12] , 2006	1	24/F	Right SCA, PCA and PcomA	Duplicated SCA and	Anisocoria and occasional light sensitivity	None	Refused to accept the treatment and no improvement
Liang <i>et al</i> ^[13] , 2009	7	NA	4 cases were PCA, 1 was BA, and 2	Atherosclerosis	The case caused by a conflict between BA and	NA	NA

			was PcomA		nerve showed a dilation of pupil, and the remaining cases were not described		
Satoshi <i>et al</i> ^[14] , 2010	1	79/F	Left PCA	Tortuous	10 d, anisocoria and transient ptosis	None	By dissecting the arachnoid membrane surrounding the oculomotor nerve and improved
Tsai <i>et al</i> ^[15] , 2011	1	55/F	Right PcomA and PCA	Tortuous	20 yr, anisocoria, bilateral eye movements were limited	Binocular diplopia	Multiple strabismus surgeries and no improvement
Tocco <i>et al</i>	1	33/F	Right PCA	Fetal-type	right	Anisocoria, right Migraine	Spontaneous

<i>al</i> ^[16] , 2011			PCA		ptosis, diplopia, ophthalmoplegia and headache		improvement over 10 wk
Cruz <i>et al</i> ^[17] , 2013	1	75/F	Right PcomA	None	Anisocoria, binocular diplopia, right upper eyelid ptosis	None	Carbamazepine and effective
Fukushima <i>et al</i> ^[18] , 2014	1	60/F	Left PcomA	Infundibular dilatation	2 yr, unilateral ptosis	None	Clipping of the infundibular dilatation at the origin of the PcomA and improved 1 mo after surgery
Tan <i>et al</i> ^[19] , 2014	1	24/F	Right PCA	None	Anisocoria, right ptosis and impaired	None	Paracetamol and ptosis, anisocoria, impaired pupillary

					pupillary light reflexes			light reflexes and ophthalmoplegia resolved after 24 h
Hashimoto <i>et al</i> ^[20] , 2016	1	40/F	Left SCA	Elongated	Intermittent paroxysmal binocular diplopia	Atopic dermatitis, alcohol and somking		Carbamazepine, phenytoin, gabapentin and improved
Shimizu <i>et al</i> ^[21] , 2016	2	47/M	Right PcomA	None	Right ophthalmoplegia, pupillomotor paresis	Hypertension		Third nerve palsy symptoms were improving slowly without additional treatment
		43/F	Left PcomA	None	Left ophthalmoplegia with blepharoptosis	Hypertension, obesity, smoking		Conservative treatment with prednisolone and improved over 4 mo
Joshi <i>et al</i>	1	62/M	Right SCA	Duplicated SCA	Right diplopia	Ischaemic heart		Ocular symptoms

al^[22], 2017

and periorbital disease, were resolved
discomfort hypertension and completely after 24
hyperlipidaemia h

BA: Basilar artery; F: Female; M: Male; MVD: Microvascular decompression; ON: Oculomotor nerve; ONP: Oculomotor nerve palsy; PCA: Posterior cerebral artery; PcomA: Posterior communicating artery; SCA: Superior cerebellar artery.

- 1 **Boeri R**, Passerini A. The megadolichobasilar anomaly. *J Neurol Sci* 1964; **1**: 475-484 [PMID: 14221943 DOI: 10.1016/0022-510x(64)90116-9]
- 2 **Hopkins EW**, Poser CM. Posterior cerebral artery ectasia. An unusual cause of ophthalmoplegia. *Arch Neurol* 1973; **29**: 279-281 [PMID: 4728190 DOI: 10.1001/archneur.1973.00490280091015]
- 3 **Scotti G**. Internal carotid origin of a tortuous posterior cerebral artery. A cause of ophthalmoplegia. *Arch Neurol* 1974; **31**: 273-275 [PMID: 4413941 DOI: 10.1001/archneur.1974.00490400087011]
- 4 **Imes RK**, Monteiro ML, Hoyt WF. Ophthalmoplegic migraine with proximal posterior cerebral artery vascular anomaly. *J Clin Neuroophthalmol* 1984; **4**: 221-223 [PMID: 6240494]
- 5 **Morimoto K**, Nagatani M, Mogami H. A case simulating ophthalmoplegic migraine: clinicopathological study. *Headache* 1985; **25**: 426-428 [PMID: 4086294 DOI: 10.1111/j.1526-4610.1985.hed2508426.x]
- 6 **Smoker WR**, Corbett JJ, Gentry LR, Keyes WD, Price MJ, McKusker S. High-resolution computed tomography of the basilar artery: 2. Vertebrobasilar dolichoectasia: clinical-pathologic correlation and review. *AJNR Am J Neuroradiol* 1986; **7**: 61-72 [PMID: 3082145]
- 7 **D'Andrea F**, Maiuri F, Gangemi M, Iaconetta G. Megadolichobasilar anomaly. Clinical and diagnostic considerations on 30 cases.

Acta Neurol (Napoli) 1992; **14**: 611-619 [PMID: 1294002]

8 **Zingale A**, Chiaramonte I, Mancuso P, Consoli V, Albanese V. Craniofacial pain and incomplete oculomotor palsy associated with ipsilateral primitive trigeminal artery. Case report. *J Neurosurg Sci* 1993; **37**: 251-255 [PMID: 7931651]

9 **Hashimoto M**, Ohtsuka K, Akiba H, Harada K. Vascular compression of the oculomotor nerve disclosed by thin-slice magnetic resonance imaging. *Am J Ophthalmol* 1998; **125**: 881-882 [PMID: 9645733 DOI: 10.1016/s0002-9394(98)00051-8]

10 **Tilikete C**, Vial C, Niederlaender M, Bonnier PL, Vighetto A. Idiopathic ocular neuromyotonia: a neurovascular compression syndrome? *J Neurol Neurosurg Psychiatry* 2000; **69**: 642-644 [PMID: 11032618 DOI: 10.1136/jnnp.69.5.642]

11 **Versino M**, Colnaghi S, Todeschini A, Candeloro E, Ravaglia S, Moglia A, Cosi V. Ocular neuromyotonia with both tonic and paroxysmal components due to vascular compression. *J Neurol* 2005; **252**: 227-229 [PMID: 15729532 DOI: 10.1007/s00415-005-0612-7]

12 **Albayram S**, Ozer H, Sarici A, Murphy K, Miller N. Unilateral mydriasis without ophthalmoplegia--a sign of neurovascular compression? Case report. *Neurosurgery* 2006; **58**: E582-3; discussion E582-3 [PMID: 16528152 DOI: 10.1227/01.neu.0000199160.93257.49]

13 **Liang C**, Du Y, Lin X, Wu L, Wu D, Wang X. Anatomical features of the cisternal segment of the oculomotor nerve: neurovascular relationships and abnormal compression on magnetic resonance imaging. *J Neurosurg* 2009; **111**: 1193-1200 [PMID: 19267538 DOI: 10.3171/2009.1.JNS081185]

14 **Satoshi Kashii** HT IF. Mydriasis Caused by Oculomotor Nerve Compression by the Tortuous Posterior Cerebral Artery (P2). 2010 Annual Meeting Syllabus. 2010

15 **Tsai TH**, Demer JL. Nonaneurysmal cranial nerve compression as cause of neuropathic strabismus: evidence from high-resolution

magnetic resonance imaging. *Am J Ophthalmol* 2011; **152**: 1067-1073.e2 [PMID: 21861970 DOI: 10.1016/j.ajo.2011.05.031]

16 **Tocco P**, Fenzi F, Cerini R, Monaco S. Adult-onset migraine-related ophthalmoplegia and omolateral fetal-type posterior cerebral artery. *BMJ Case Rep* 2011; **2011** [PMID: 22674608 DOI: 10.1136/bcr.10.2011.4930]

17 **Cruz FM**, Blitz AM, Subramanian PS. Partial third nerve palsy and ocular neuromyotonia from displacement of posterior communicating artery detected by high-resolution MRI. *J Neuroophthalmol* 2013; **33**: 263-265 [PMID: 23912769 DOI: 10.1097/WNO.0b013e31829eb397]

18 **Fukushima Y**, Imai H, Yoshino M, Kin T, Takasago M, Saito K, Nakatomi H, Saito N. Ptosis as partial oculomotor nerve palsy due to compression by infundibular dilatation of posterior communicating artery, visualized with three-dimensional computer graphics: case report. *Neurol Med Chir (Tokyo)* 2014; **54**: 214-218 [PMID: 24201097 DOI: 10.2176/nmc.cr2012-0383]

19 **Tan T**, Tee JW, Wang YY. Oculomotor nerve palsy secondary to aberrant posterior cerebral artery. *BMJ Case Rep* 2014; **2014** [PMID: 24980999 DOI: 10.1136/bcr-2014-205063]

20 **Hashimoto Y**, Hideyama T, Yamagami A, Sasaki T, Maekawa R, Shiio Y. A case of ocular neuromyotonia caused by neurovascular compression of the oculomotor nerve by the elongated superior cerebellar artery. *J Neurol* 2016; **263**: 1236-1238 [PMID: 27113599 DOI: 10.1007/s00415-016-8117-0]

21 **Shimizu M**, Tozaka N, Ishii A, Mamada N, Terada M, Takuma H, Tamaoka A. Third nerve palsy due to local inflammation associated with vascular compression: A case series. *J Neurol Sci* 2016; **367**: 365-367 [PMID: 27423622 DOI: 10.1016/j.jns.2016.06.048]

22 **Joshi S**, Tee WWH, Franconi C, Prentice D. Transient oculomotor nerve palsy due to non-aneurysmal neurovascular compression.

J Clin Neurosci 2017; **45**: 136-137 [PMID: 28774492 DOI: 10.1016/j.jocn.2017.07.006]