

Isolated facial nerve palsy after arterial switch operation: A rarity

Sir,

A 28-day-old male infant (3.5 kg) presented with tachypnea and cyanosis. On evaluation, he had dextro-transposition of great arteries with ventricular septal defect. The neonate underwent an arterial switch operation (ASO) with moderate hypothermic cardiopulmonary bypass (28°C). He was shifted to the Intensive Care Unit (postsurgery) on inotropic support (dopamine and dobutamine [5 mcg/kg/min each]; nitroglycerine [0.5 mcg/kg/min]). Transthoracic echo revealed good biventricular contractility, mild tricuspid regurgitation. Soon after extubation (in 48 h), features of isolated (left) facial nerve palsy were noticed (drooping of angle of mouth, loss of nasolabial fold, dribbling of saliva) [Figure 1]. The affected eye remained partially open during sleep. Noncontrast computerized tomography of the head was normal. The neonate was initially fed through nasogastric tube before resuming oral feeding. There was no sucking/swallowing difficulty. For Bell's palsy (provisional diagnosis), injection dexamethasone was given (0.3 mg/kg/day for 3 days). Oral prednisolone was continued for 2 weeks. He showed no improvement of facial palsy after 14 days. However, salivation and partial eye opening during sleep improved. We gave symptomatic treatment with methylcellulose eye drops. Prednisolone was tapered over next 2 weeks. The patient remained stable and was feeding well. He was electively discharged. On follow-up after 4 weeks, the child still had some features of Bell's palsy. However, in the second review after 12 weeks, the baby has



Figure 1: Child on postoperative day 2. Notice there is drooping of the left angle of mouth (solid black arrow). Also on comparing with the right side (red thin arrow), there is loss of nasolabial fold on the left side (black thin arrow)

shown improvement with no facial asymmetry and gained weight.

Neurological insults such as cognitive impairment, memory loss, encephalopathy including seizures, paralysis, coma, and brain death after cardiac surgery have been reported in the literature.^[1] Among these, seizures are the most commonly reported.^[1] Isolated cranial nerve injury (peripheral) after cardiac surgery is an extremely rare event. The most commonly injured cranial nerves reported are the superior laryngeal nerve and hypoglossal nerve.^[2]

Idiopathic facial palsy (also called Bell's Palsy) in the newborn is rare, occurring in 0.23% to 1.8% of live births. Birth trauma, vascular ischemia, autoimmune inflammatory phenomenon, and heredity may be causative mechanisms.^[3] In addition, reports of neonatal Bell's palsy^[4] caused by traumatic delivery, congenital malformations, and infections including otitis media (as early as 2 weeks of life) with rapid response to oral steroids (and antibiotics where indicated) are also available.^[3] Cayler cardiofacial syndrome would be close mimic to Bell's palsy; however, in our case, the mother remembers normal features till before surgery. Besides, persistence of asymmetric face during sleep also excludes the Cayler cardiofacial syndrome.^[5] This baby developed facial palsy after ASO temporally, with no initial response to systemic steroids. The cause may be a vascular ischemia (transient) or compressive neuropathy. Neonatal idiopathic facial nerve palsy as in our case is rarely encountered. Extensive literature review yielded a similarly isolated case report of isolated facial nerve entrapment after an ASO,^[6] which recovered completely. The child on regular follow-up shows improvement. We highlight this rare complication after pediatric cardiac surgery, for the early recognition and treatment benefit by caregivers involved such as cardiologists, cardiac surgeons, and intensivists.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

**Manoj Kumar Sahu, Intekhab Alam, Sarvesh Pal Singh,
Ramesh Menon, Sachin Talwar**

Department of Cardiothoracic and Vascular Surgery,
All India Institute of Medical Sciences, New Delhi, India
E-mail: drmanoj_sahu@gmail.com

REFERENCES

1. Menache CC, du Plessis AJ, Wessel DL, Jonas RA, Newburger JW. Current incidence of acute neurologic complications after open-heart operations in children. *Ann Thorac Surg* 2002;73:1752-8.
2. Hamdan AL, Moukarbel RV, Farhat F, Obeid M. Vocal cord paralysis after open-heart surgery. *Eur J Cardiothorac Surg* 2002;21:671-4.
3. Saini A, Singhi P, Sodhi KS, Gupta A. Bell palsy in a neonate with rapid response to oral corticosteroids: A case report. *J Child Neurol* 2013;28:506-8.
4. McLellan MS, Parrino CS. Bell's palsy at 1 month 4 days of age. *Am J Dis Child* 1969;117:727-9.
5. Pawar SJ, Sharma DK, Srilakshmi S, Reddy Chejeti S, Pandita A. Cayler cardio-facial syndrome: An uncommon condition in newborns. *Iran J Pediatr* 2015;25:e502.
6. Alcaraz A, Lopez-Herce J, Castro P, Bustinza A, Moroto C. Facial nerve paralysis following pediatric cardiac surgery. *Panminerva Med* 1995;37:148-9.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

Access this article online**Quick Response Code:****Website:**

www.annalspc.com

DOI:

10.4103/0974-2069.197057

How to cite this article: Sahu MK, Alam I, Singh SP, Menon R, Talwar S. Isolated facial nerve palsy after arterial switch operation: A rarity. *Ann Pediatr Card* 2017;10:92-3.