Case Report

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Congenital Hypoplasia of the Depressor Angularis Oris Muscle (DAOM): A Rare Case Report

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Abstract

The asymmetric faces due to congenital Hypoplasia of the Depressor Anguli Oris Muscle (DAOM) should be looked for because these infants have additional associated anomalies in over 20%of cases. During crying, angle of mouth and mandible are pulled down with flattening of the nasolabial fold on the normal side due to unopposed action of DAOM. Cardiovascular anomalies and congenital dislocation of hips are most commonly associated. We conclude in this case as we know there may be any congenital anomalies are found but in this child there is congenital anomalies were found in cardiac i.e. having PDA of 4mm and Left to right Shunt. No treatment is required because the asymmetry is not noticeable in a grown up child.

Keywords: Asymmetric; Hypoplasia; Infants; Congenital; Anamolies.

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Introduction

The asymmetric faces due to congenital Hypoplasia of the Depressor Anguli Oris Muscle (DAOM) should be looked for because these infants have additional associated anomalies in over 20% of cases. During crying, angle of mouth and mandible are pulled down with flattening of the nasolabial fold on the normal side due to unopposed action of DAOM. Cardiovascular anomalies and congenital dislocation of hips are most commonly associated.

Case Report

A Full Term (37 weeks) Male Neonate was born by LSCS (Due to Breech Presentation) to a 30 years old Prime- gravid a mother with uneventful antenatal and perinatal period. Birth weight was 2.75 kg. Delivered on 12/08/2019 at 3.36 pm in KLE Ayurveda Hospital, Shahapur Belgaum (Table 1 & 2). There was no history of birth trauma. He had a vigorous cry and was closing his eyes satisfactorily. Umbilical cord having for two arteries and oneumbilical vein ere seen. The face was symmetrical while the neonate was quiet or sleeping, however on crying, the right corner of the mouth drew rightand downward, while left corner did not move clinical evaluation revealed normal vital parameters. Frontalis, Orbicularis Oculi, Zygomaticus and Mentis muscles functioned adequately. Extra ocular movements were intact. There was a palpable thinning of the left lower lip near its left margin. Further evaluation revealed a deformed low set of ear on both side. Neonate was diagnosed as a case of asymmetric crying facies due to Congenital Hypoplasia of Left Depressor Angularis Oris Muscle (Fig. 1 & 2). All reflexes are normal. Systemic examination was essentially within normal limits.

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Obstetric History:

$G_2P_0A_1L_1D_0$

G1: Abortion: D&C Done in 16 week

G2 Present Pregnancy

LMP: 04/12/2018

EDD: 11/09/2019

LSCS: 12/08/2019 @3.36 PM (Breech Presentation)

Investigation: on 12/08/2019

Table 1: Investigation of Mother.

Haematological	Biochemistry	Serological
HB;12.6 gm/dl	Blood Urea: 19 mg /dl	HIV1 & 2: Negative
TLC:7000 cu/mm	Sr.Creat: 1.0 mg/ dl	HBsAG: Negative
Platelet: 2.30 Lakh		VDRL: Negative
BT:3 Min		
CT :6 Min		
Blood Group:AB +ve		

Table 2: Radiological Anti Natal Scans.

Date	Impression	Medications
04/03/2019 1st Trimester	• Intra uterine Live fetus at 13 weeks with low line placenta anomaly scan at 20 weeks is recommended. • CRL:65 mm	• Tab.Calcium 1 OD • Garbhasamskara
16/05/2019 2nd Trimester	• Intra uterine single live fetus of 23-24 weeks with breech presentation and advised follow up USG after 6-8 weeks is recommended to asses evolving anomaly growth and liquor. • BPD-58.7 mm • HC-219 mm • AC-185 mm • FL-42 mm	• Iron, Calcium and Protein Supplements • Inj.TT 0.5ml IM Two Doses. • Garbhasamskara
20/07/2019 3rd Trimester	• A single live intra uterine pregnancy with breech presentation at the time of scan 33weeks 1 day of gestation (+/-2 days) • AC lags by 2weeks with the fetal weight being less than 25th % with moderate oligohydromniosis Asymmetrical IUGR • Fetal Left Renal Pyelectesis needs postnatal follow up • BPD-08.2 cm • HC-30.38 cm • AC-26.11 cm • FL-06.37 cm	• Iron, Calcium and Protein Supplements • HerminIV3Pointsi/v/oOligohydromniosis • Garbhasamskara
26/07/2019 3rd Trimester	• Intra uterine single live foetus of 33-34 weeks with breech presentation with mild oligohydromniosis with normal Doppler indices • BPD-86.5 mm • HC-309.5 mm • AC-284 mm • FL-63.5 mm	• Iron, Calcium • Garbhasamskara
12/08/2019 3rd Trimester	• A single live intra uterine pregnancy with breech presentation at time of scan 36 weeks of gestation (+/-2)with mild oligohydromniosis • Fetal left renal pyelectesis needs post natal follow up • BPD-08.86 cm • HC-32.17 cm • AC-36.00 cm • FL-06.92 cm.	• Iron, Folic Acid and Calcium • Garbhasamskara

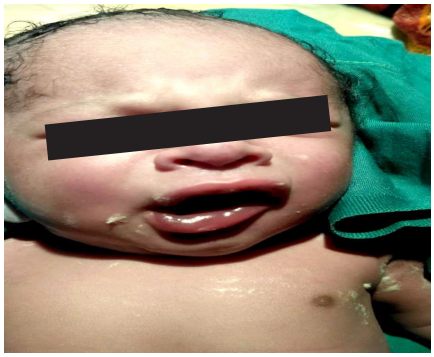
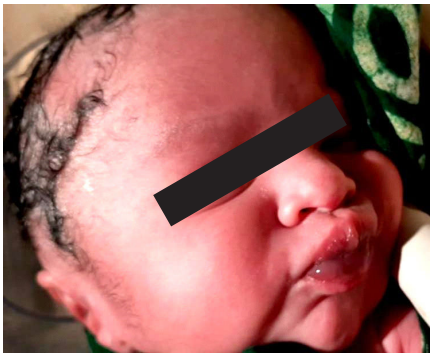

Fig. 1 and 2: Right angle of mouth was pulled down to right side and downward due to Hypoplasia of Depressor Angularis Oris Muscle on left side.

Discussion

Congenital Hypoplasia of Depressor AngularisOris Muscle causes facial asymmetry, especially when Infant cries[2] CHDAOM is a rare entity affecting 3–6/1000 live births and often mimics facial nerve palsy.[1] The Depressor Anguli Oris Muscleis originates from the mandible and inserts into the angle of the mouth. It is innervated by buccal and mandibular branches of ipsilateral facial nerve and its function is to depress the ipsilateral corner of mouth and to evert the lower lip. In CHDAOM, the angle of mouth and mandible are pulled down on normal side due to unopposed action of DAOM, while no movement on hypoplasia side. The affected lower lip may look thinner because of the lack of eversion and muscle agenesis. The exact cause of CHDAOM is unknown. The patient usually presents in the neonatal period with asymmetric crying facies but with symmetrical forehead wrinkling, eyelid closure and nasolabial furrowing in contrast to facial nerve palsy. Diagnosis is predominantly clinical; electrophysiological studies may demonstrate normal nerve conduction time to mentalis and orbicularisoculi muscles. CHDAOM may be associated with other anomalies like congenital heart disease (40%–50%), head and neck anomalies (45%–50%), skeletal defects (22%) and genitourinary anomalies; as well as along with syndromes like CATCH22, Caylercardiofacial syndrome, vertebral defects, anal atresia, cardiac defects, Trachea-esophageal Fistula, Renal Anomalies, and Hip Dislocation and DiGeorge syndrome.3This condition should be differentiated from other causes of facial asymmetry at birth like intra-uterine position and pressure over stylomastoid foramen during labor, which may cause facial paralysis. This is a benign condition and mainly a cosmetic problem. It does not interfere with feeding or speech. The best time for diagnosis is careful physical examination of newborn and if present, neonate should be screened for associated anomalies. The importance of recognizing CHDAOM lies in the fact that there is strong association of this anomaly with other significant anomalies. In an isolated anomaly, no treatment is required because the asymmetry is not noticeable in a grown up child.In this case, Neurophysician given opinion that congenital absence of DAOM and also taken opinion of Cardiologists, no cardiac abnormalities.Orthopedist has given an opinion there was no any bones and joint deformities.

Conclusion

We conclude in this case as we know there may be any congenital anomalies are found but in this child there is congenital anomalies were found in cardiac i.e. having PDA of 4 mm and Left to right Shunt. No treatment is required because the asymmetry is not noticeable in a grown up child.

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